United States
Department of
Agriculture

**Natural
Resources
Conservation
Service**

Washington Basin Outlook Report June 1, 1997

Basin Outlook Reports
and
Federal - State - Private
Cooperative Snow Surveys

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How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Natural Resources Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

Washington
Water Supply Outlook

June 1997

General Outlook

As we enter into another summer here in Washington we are experiencing high streamflows which are expected to continue throughout most of the season. Forecasts are based upon above snowpack, precipitation, and streamflow conditions throughout Oct 1 - June 1.

This report will be the last printed report for Washington this season. Additional seasonal data is available from our National Water & Climate Center and individual state homepages. (see page 5 for internet addresses and links)

Snowpack

The June 1 statewide SNOTEL readings remained well above average at 150%. Snowpack varied from near to much above average throughout the state. Snow at many of the SNOTEL sites in the state has melted while some sites that normally report no snow at this time are reporting well above average snowpack. Westside averages from available SNOTEL and June 1 snow surveys included the North Puget Sound river basins with 131% of average, the Central Puget Sound river basins with 390%, and the Lewis-Cowlitz basins with 564%. Snowpack along the east slopes of the Cascade Mountains included the Yakima area with 303%, and the Wenatchee area with 216% of average. Snowpack in the Spokane River Basin was at 168%, and the Pend Oreille River Basin, including Canadian data, had 165% of average. Because of this year's extreme snowpack in some areas of the state, June 1 averages are exceeding 1000% of average at some individual SNOTEL sites. Snowpack from these sites has been melting very rapidly with the last month's above average temperatures.

BASIN	PERCENT OF LAST YEAR	PERCENT OF AVERAGE
Spokane	158	168
Newman Lake	N/A	N/A
Pend Oreille	98	165
Okanogan	83	137
Methow	94	180
Similkameen	66	101
Wenatchee	164	216
Chelan	119	204
Stemilt Creek	N/A	N/A
Yakima	262	303
Ahtanum Creek	484	853
Walla Walla	N/A	N/A
Cowlitz	176	190
Lewis	418	374
White	134	238
Green	339	339
Cedar	N/A	N/A
Snoqualmie	346	177
Skykomish	732	604
Skagit	110	174
Baker	N/A	125
Nooksack	1003	78
Olympic Peninsula	N/A	N/A

Precipitation

During the month of May, precipitation at the National Weather Service and Natural Resources Conservation Service climate stations varied from above to much below average for Washington. The highest percent of average precipitation in the state was at Bumping Ridge SNOTEL site near Bumping Lake, Washington. Bumping Ridge reported 201% of average for a total of 5.8 inches. Average for this site is 2.88 inches for May. Averages for the water year varied from 113% of average in the Okanogan - Methow to 155% of average in the Yakima River basins. The highest individual site average for the water year was 199% of average at Bumping Ridge SNOTEL site near Bumping Lake in northwest Yakima County.

BASIN	MAY PERCENT OF AVERAGE	WATER YEAR PERCENT OF AVERAGE
Spokane	92	139
Colville-Pend Oreille	106	133
Okanogan-Methow	99	113
Wenatchee-Chelan	94	136
Yakima	83	155
Walla Walla	52	149
Cowlitz-Lewis	94	140
White-Green	88	144
Central Puget Sound	92	147
North Puget Sound	116	137
Olympic Peninsula	126	125

Reservoir

Reservoir storage in Washington is starting to level off. Reservoir operators will soon begin to relax as the majority of mountain runoff flows downstream. Reservoir storage in the Yakima Basin was 903,800 acre feet or 97% of average. Storage at other reservoirs included Roosevelt at 84% of average and 46% of capacity, Banks Lake at 159% of average and 93% of capacity, and the Okanogan reservoirs with 129% of average. The power generation reservoirs included the following: Coeur d'Alene Lake, 454,500 acre feet, or 162% of average and 191% of capacity; Chelan Lake, 511,200 acre feet, 113% of average and 76% of capacity; and Ross Lake at 115% of average and 84% of capacity. Greater than average releases continued from most reservoirs across the state.

BASIN	PERCENT OF CAPACITY	PERCENT OF AVERAGE
Spokane	191	162
Colville-Pend Oreille	52	94
Okanogan-Methow	99	129
Wenatchee-Chelan	76	113
Yakima	85	97
North Puget Sound	84	115

For more information contact your local Natural Resources Conservation Service office.

Streamflow

Forecasts for summer streamflows are mostly for well above average. They vary from 113% of average for the Elwha near Port Angeles to 228% of average for the Klickitat near Glenwood. June forecasts for some western Washington streams include: Cedar River near Cedar Falls, 132% of average; Green River, 122%; and the Dungeness River, 117%. Some eastern Washington streams include the Yakima River near Parker, 170%; the Wenatchee River at Plain, 178%; and the Colville River at Kettle Falls, 177%. Volumetric forecasts show little change from last month and are indicative of actual flows measured year-to-date.

May streamflows were all well above average. The Yakima River at Kiona had the highest flows at 293% of average; and the Columbia River at Birchbank, with 139% of average, had the lowest in the state. Other streamflows were the following percentage of average: the Cowlitz River, 143%; the Skagit River, 150%; the Okanogan River, 205%; the Spokane River, 190%; the Wenatchee River, 159%, and the Yakima River at Cle Elum, 179%.

BASIN	PERCENT OF AVERAGE MOST PROBABLE FORECAST (50 PERCENT CHANCE OF EXCEEDENCE)
Spokane	166-183
Colville-Pend Oreille	122-177
Okanogan-Methow	143-169
Wenatchee-Chelan	137-199
Yakima	142-228
Walla Walla	126-175
Cowlitz-Lewis	116-158
Green River	122
Central Puget Sound	132-147
North Puget Sound	129-132
Olympic Peninsula	113-117

STREAM	PERCENT OF AVERAGE MAY STREAMFLOWS
Pend Oreille below Box Canyon	187
Kettle at Laurier	157
Columbia at Birchbank	139
Spokane at Long Lake	190
Similkameen at Nighthawk	189
Okanogan at Tonasket	205
Methow at Pateros	164
Chelan at Chelan	168
Wenatchee at Pashastin	159
Yakima at Cle Elum	179
Yakima at Parker	196
Naches at Naches	201
Yakima at Kiona	293
Grande Ronde at Troy	173
Snake below Lower Granite Dam	167
SF Walla Walla near Milton Freewater	202
Columbia at The Dalles	161
Lewis at Ariel	130
Cowlitz below Junefield Dam	143
Skagit at Concrete	150

For more information contact your local Natural Resources Conservation Service office.

BASIN SUMMARY OF SNOW COURSE DATA

JUNE 1997

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90
ALPINE MEADOWS PILL	3500	6/01/97	---	48.7S	12.5	--
BADGER PASS PILLOW	6900	6/01/97	---	36.2	37.5	20.9
BARKER LAKES PILLOW	8250	6/01/97	---	12.0	16.7	10.0
BASIN CREEK PILLOW	7180	6/01/97	---	4.7	7.0	4.7
BASSOO PEAK	5150	5/29/97	0	.0	--	--
BEAVER CREEK TRAIL	2200	5/28/97	0	.0	.0	--
BEAVER PASS	3680	5/29/97	53	28.1	5.2	--
BIG WHITE MTN CAN.	5100	5/28/97	22	10.9	17.2	7.6
BLACK PINE PILLOW	7100	6/01/97	---	.0	5.3	2.4
BLACKWALL PEAK CAN.	6370	6/01/97	---	28.1	33.1	26.2
BLEWETT PASS#2PILLOW	4270	6/01/97	---	.0S	.0	.0
BRENDA MINE CAN.	4450	6/01/97	0	.0	--	--
BROWN TOP AM	6000	5/29/97	134	61.2	54.2	--
BUMPING LAKE	3450	5/28/97	4	2.1	--	1.2
BUMPING RIDGE PILLOW	4600	6/01/97	---	29.1S	5.7	6.3
CAYUSE PASS	5300	6/01/97	---	97.0E	--	--
CBICKEN CREEK	4060	5/27/97	0	.0	.0	.0
COMBINATION PILLOW	5600	6/01/97	---	.0	.0	.0
COPPER BOTTOM PILLOW	5200	6/01/97	---	.0	.0	.0
CORRAL PASS PILLOW	6000	6/01/97	---	42.6S	28.8	19.6
COUGAR MTN. PILLOW	3200	6/01/97	---	.0S	.0	.0
DALY CREEK PILLOW	5780	6/01/97	---	.0	.0	.0
DEVILS PARK	5900	5/28/97	89	46.6	40.6	31.8
DISCOVERY BASIN	7050	5/30/97	15	7.0	6.8	4.8
DOCK BUTTE AM	3800	6/01/97	---	61.0E	--	52.5
DOMMERIE FLATS	2200	5/28/97	0	.0	--	--
EASY PASS AM	5200	6/01/97	---	122.0E	--	73.3
ELBOW LAKE PILLOW	3200	6/01/97	---	14.6S	.0	8.4
EMERY CREEK PILLOW	4350	6/01/97	---	.0	.0	.0
ENDERBY CAN.	5800	5/31/97	87	45.7	50.4	38.9
FARRON CAN.	3700	5/29/97	4	.2	--	--
FISB LAKE	3370	5/29/97	26	15.6	.0	--
FISH LAKE PILLOW	3370	6/01/97	---	21.5S	1.6	5.0
FLATTOP MTN PILLOW	6300	6/01/97	---	53.5	56.6	34.4
FREEZEOUT CK. TRAIL	3500	5/29/97	2	.6	.0	--
FROHNER MDWS PILLOW	6480	6/01/97	---	.0	.0	1.2
GRAVE CRK PILLOW	4300	6/01/97	---	.0	.0	.0
GRAYSTOKE LAKE CAN.	5500	5/29/97	29	13.2	--	10.3
GREEN LAKE PILLOW	6000	6/01/97	---	32.4S	6.7	3.8
GRIFFIN CR DIVIDE	5150	5/29/97	0	.0	--	--
GROUSE CAMP PILLOW	5380	6/01/97	---	.0S	.0	.0
HAND CREEK PILLOW	5030	6/01/97	---	.0	.0	.0
HARTS PASS PILLOW	6500	6/01/97	---	40.9S	50.5	25.3
HELL ROARING DIVIDE	5770	5/30/97	42	23.1	27.1	11.2
HERRIG JUNCTION	4850	5/27/97	40	21.9	18.9	2.4
HIGB RIDGE PILLOW	4980	6/01/97	---	.0	.0	.6
HOODOO BASIN PILLOW	6050	6/01/97	---	58.9	46.9	29.2
HUMBOLDT GLCB PILLOW	4250	6/01/97	---	.0	.0	.0
JUNE LAKE PILLOW	3200	6/01/97	---	9.0S	.0	.0
KRAFT CREEK PILLOW	4750	6/01/97	---	.0	.0	.0
LOLO PASS PILLOW	5240	6/01/97	---	31.8	11.7	.0
LONE PINE PILLOW	3800	6/01/97	---	37.4S	5.8	9.4
LOOKOUT PILLOW	5140	6/01/97	---	21.3	10.5	10.0
LOST BORSE MTN CAN.	5850	5/30/97	6	2.1	13.0	3.8
LOST BORSE PILLOW	5000	6/01/97	---	.0S	.0	.0
LOST LAKE PILLOW	6110	6/01/97	---	80.8	53.7	46.8
LUBRECHT PILLOW	4680	6/01/97	---	.0	.0	.0
LYMAN LAKE PILLOW	5900	6/01/97	---	73.9S	73.0	43.3
MEADOWS CABIN	1900	5/29/97	0	.0	.0	--
MEADOWS PASS PILLOW	3240	6/01/97	---	.0S	.0	.0
MICA CREEK PILLOW	4750	6/01/97	---	7.6	.0	--
MISSION CREEK CAN.	5800	5/28/97	40	19.3	18.7	13.6
MOOSE CREEK PILLOW	6200	6/01/97	---	4.2	5.0	.0
MORSE LAKE PILLOW	5400	6/01/97	---	54.9S	44.1	21.4
MOSES MTN PILLOW	4800	6/01/97	---	.0S	.0	.0
MOSQUITO RDG PILLOW	5200	6/01/97	---	30.0	19.5	16.0
MT. BLUM AM	5800	6/01/97	---	104.0E	--	68.1
MOUNT CRAG PILLOW	4050	6/01/97	---	5.7S	4.5	.0
MT. KOBAU CAN.	5500	5/31/97	11	5.0	11.2	5.0
MT. GARDNER PILLOW	2860	6/01/97	---	.0S	.0	.0
N.F. ELK CR PILLOW	6250	6/01/97	---	.3	.0	.9
NEVADA CREEK PILLOW	6480	6/01/97	---	3.7	7.8	3.8
NEW HOZOMEEN LAKE	2800	5/29/97	0	.0	.0	--
NEZ PERCE CMP PILLOW	5650	6/01/97	---	.9	.0	.2
NOISY BASIN PILLOW	6040	6/01/97	---	48.1	44.0	30.2
NORTB FORK JOCKO	6330	5/30/97	80	44.2	39.4	26.3
OLALLIE MDWS PILLOW	3960	6/01/97	---	71.4S	20.3	30.0
OLALLIE MEADOWS	3630	6/01/97	---	98.0E	--	41.3
OPBIR PARK	7150	5/26/97	15	6.1	8.6	7.6
PARADISE PARK PILLOW	5500	6/01/97	---	104.2S	63.6	48.1
PARK CK RIDGE PILLOW	4600	6/01/97	---	40.1S	22.1	5.2
PETERSON MDW PILLOW	7200	5/30/97	---	6.9	7.3	2.7
PIGTAIL PEAK PILLOW	5900	6/01/97	---	81.8S	46.4	37.5
PIKE CREEK PILLOW	5930	6/01/97	---	11.4	19.7	7.9
POPE RIDGE PILLOW	3540	6/01/97	---	.0S	.0	.0
POTATO BILL PILLOW	4500	6/01/97	---	5.5S	.0	1.1
QUARTZ PEAK PILLOW	4700	6/01/97	---	.0	.0	.0
RAINY PASS PILLOW	4780	6/01/97	---	41.5S	36.8	20.4
REX RIVER PILLOW	1900	6/01/97	---	10.3S	.0	.0
ROCKER PEAK PILLOW	8000	6/01/97	---	14.4	17.7	13.2
SADDLE MTN PILLOW	7900	6/01/97	---	16.6	30.4	17.5
SALMON MDWS PILLOW	4500	6/01/97	---	.0S	.0	.0
SASSE RIDGE PILLOW	4200	6/01/97	---	21.7S	.4	1.3
SAVAGE PASS PILLOW	6170	6/01/97	---	22.1	23.4	12.5
SCBREIBERS MDW AM	3400	6/01/97	---	60.5E	--	41.4
SBEEP CANYON PILLOW	4050	6/01/97	---	4.1S	.0	11.6
SILVER STAR MTN CAN.	5600	5/28/97	49	24.8	33.1	16.1
SKALKAHO PILLOW	7260	6/01/97	---	27.5	28.8	15.8
SKOOKUM CREEK PILLOW	3920	6/01/97	---	.0S	.0	24.1
SPENCER MDW PILLOW	3400	6/01/97	---	.3S	.0	.0
SPIRIT LAKE PILLOW	3100	6/01/97	---	.0S	.0	.0
STAHL PEAK PILLOW	6030	6/01/97	---	36.0	59.5	27.3
STAMPEDE PASS PILLOW	3860	6/01/97	---	50.8S	15.0	15.0
STEVENS PASS PILLOW	4070	6/01/97	---	34.4S	4.7	5.7
STRYKER BASIN	6180	5/27/97	61	34.0	40.6	20.6
STUART MOUNTAIN	7400	5/30/97	65	36.3	33.0	--
SUNSET PILLOW	5540	6/01/97	---	24.7	15.5	20.7
SURPRISE LKS PILLOW	4250	6/01/97	---	42.8S	15.6	14.5
TBUNDER BASIN	4200	5/29/97	51	25.0	5.6	10.0
TINKHAM CREEK PILLOW	3000	6/01/97	---	13.6S	.0	.0
TOUCHET #2 PILLOW	5530	6/01/97	---	5.6	.0	--
TROUGB #2 PILLOW	5310	6/01/97	---	.0S	.0	6.0
TUNNEL AVENUE	2450	5/29/97	0	.0	--	2.7
TV MOUNTAIN	6800	5/30/97	26	13.0	12.0	--
TWELVEMILE PILLOW	5600	6/01/97	---	.0	.0	.6
TWIN LAKES PILLOW	6400	6/01/97	---	36.1	30.5	25.8
UPPER WHEELER PILLOW	4400	6/01/97	---	.0S	.0	.0
WARM SPRINGS PILLOW	7800	6/01/97	---	24.9	31.0	19.6
WATSON LAKES AM	4500	6/01/97	---	72.0E	--	57.4
WELLS CREEK PILLOW	4200	6/01/97	---	14.5S	2.9	29.1
WHITE PASS ES PILLOW	4500	6/01/97	---	.0S	1.3	4.6

Natural Resources Conservation Service

Washington State
Snow, Water and Climate Services

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Helpful Internet Addresses

NRCS Snow Survey and Climate Services Homepages

Washington:
http://wcp.wsu.edu/nrcs/CoopSnoSrvy.htm

Oregon:
http://crystal.or.nrcs.usda.gov/snowsurveys/

Idaho:
http://id.nrcs.usda.gov/snow/snow.htm

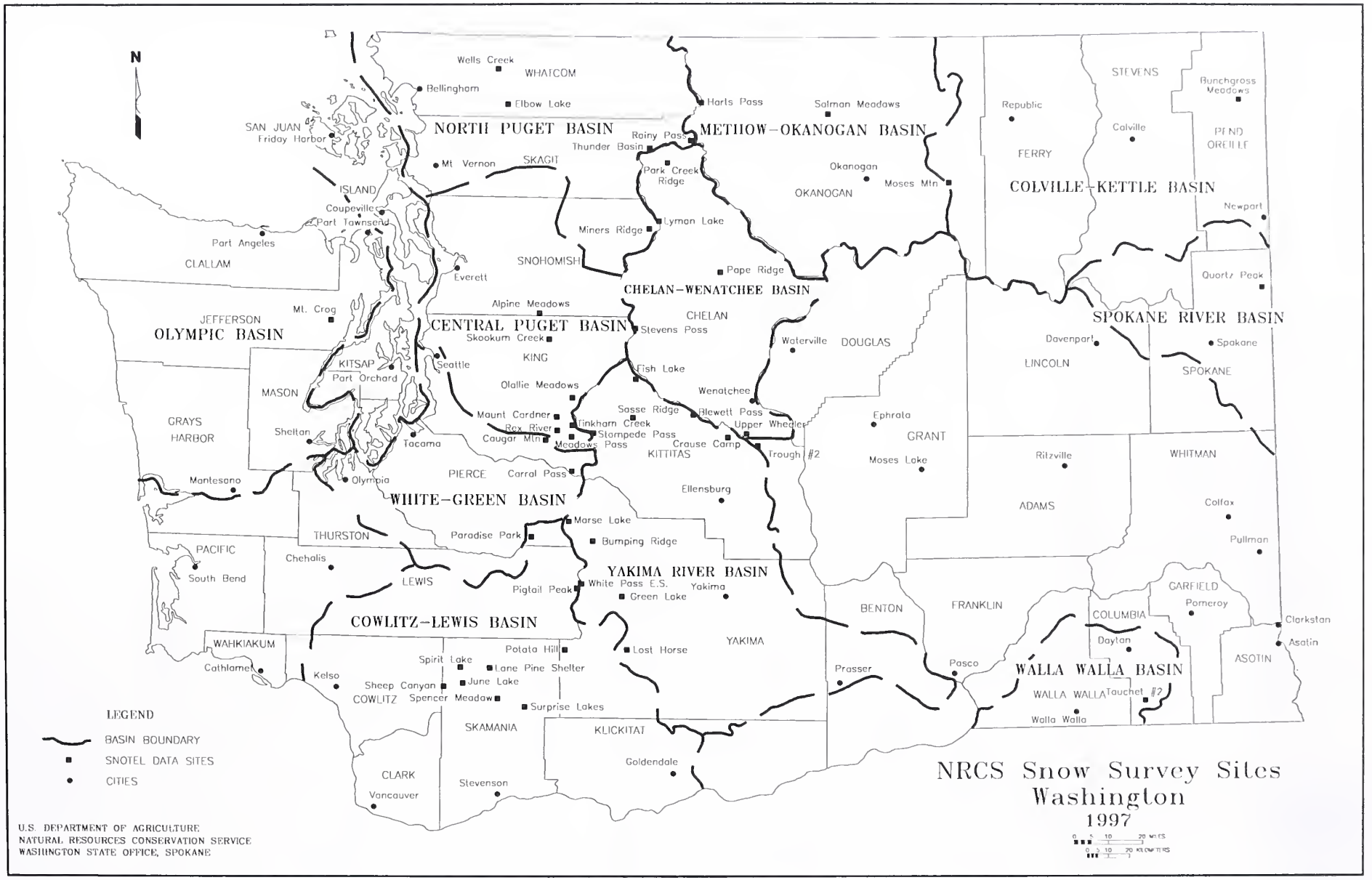
National Water and Climate Center (NWCC):
http://www.wcc.nrcs.usda.gov/

NWCC Anonymous FTP Server:
ftp.wcc.nrcs.usda.gov

USDA-NRCS Agency Homepages

USDA:
http://www.usda.gov/

NRCS National:
http://www.ftw.nrcs.usda.gov/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Wells Creek
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Bellingham
Elbow Lake
Harts Pass
Salmon Meadows
NORTH PUGET BASIN
METHOW-OKANOGAN BASIN
SAN JUAN
Friday Harbor
Rainy Pass
Thunder Basin
Mt Vernon
SKAGIT
Park Creek Ridge
Okanogan
Moses Mtn
OKANOGAN
ISLAND
Coupeville
Port Townsend
Lyman Lake
Miners Ridge
Port Angeles
CLALLAM
SNOHOMISH
Everett
Pope Ridge
CHELAN-WENATCHEE BASIN
Alpine Meadows
Mt. Crag
JEFFERSON
OLYMPIC BASIN
CENTRAL PUGET BASIN
CHELAN
Stevens Pass
Skookum Creek
Waterville
DOUGLAS
KITSAP
Port Orchard
Seattle
KING
Fish Lake
Olallie Meadows
Wenatchee
MASON
Sasse Ridge
Blewett Pass
Mount Cardner
Rex River
Tinkham Creek
Upper Wheeler
GRAYS HARBOR
Shelton
Tacoma
Cougar Mtn
Stampede Pass
Meadows Pass
Crause Camp
KITTITAS
Trough #2
Ephrata
GRANT
Moses Lake
Mantesano
Olympia
PIERCE
Carrol Pass
WHITE-GREEN BASIN
Ellensburg
Ritzville
ADAMS
WHITMAN
Colfax
Marse Lake
THURSTON
Paradise Park
Bumping Ridge
Pullman
PACIFIC
South Bend
Chehalis
LEWIS
YAKIMA RIVER BASIN
Pigtail Peak
White Pass E.S.
Yakima
Green Lake
GARFIELD
Pomeroy
BENTON
FRANKLIN
COLUMBIA
COWLITZ-LEWIS BASIN
Clarkston
Asotin
Dayton
WAHKIAKUM
Potata Hill
Lost Horse
YAKIMA
Spirit Lake
Lane Pine Shelter
Cathlamet
Kelso
June Lake
Prasser
Pasco
WALLA WALLA BASIN
Sheep Canyon
Spencer Meadow
Tauchet #2
COWLITZ
Surprise Lakes
Walla Walla
SKAMANIA
KLICKITAT
Goldendale
CLARK
Vancouver
Stevenson
LEGEND
BASIN BOUNDARY
SNOTEL DATA SITES
CITIES
U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
WASHINGTON STATE OFFICE, SPOKANE
NRCS Snow Survey Sites
Washington
1997
FERRY
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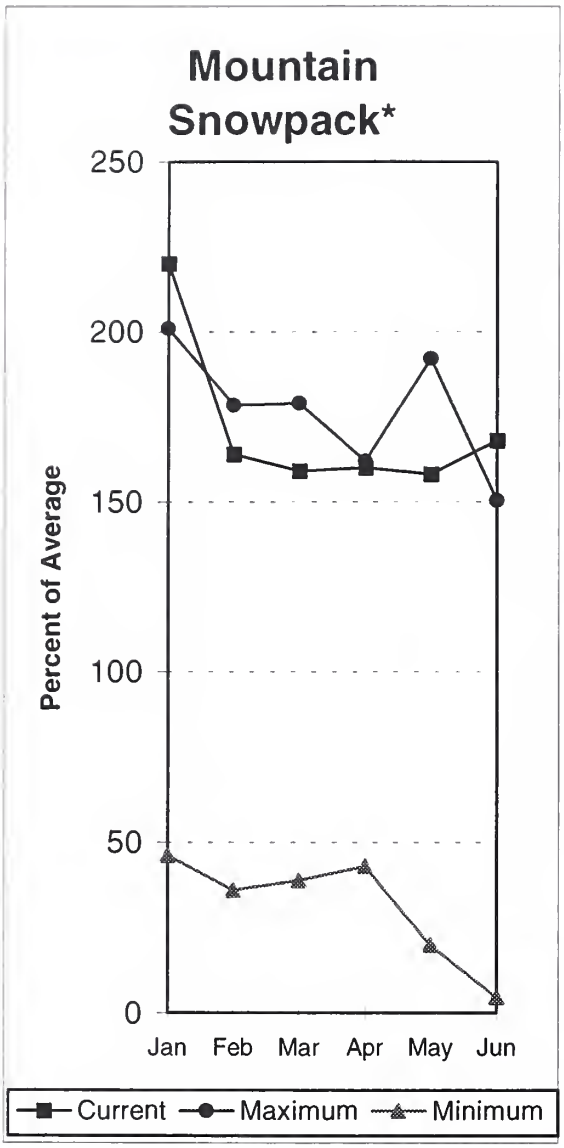
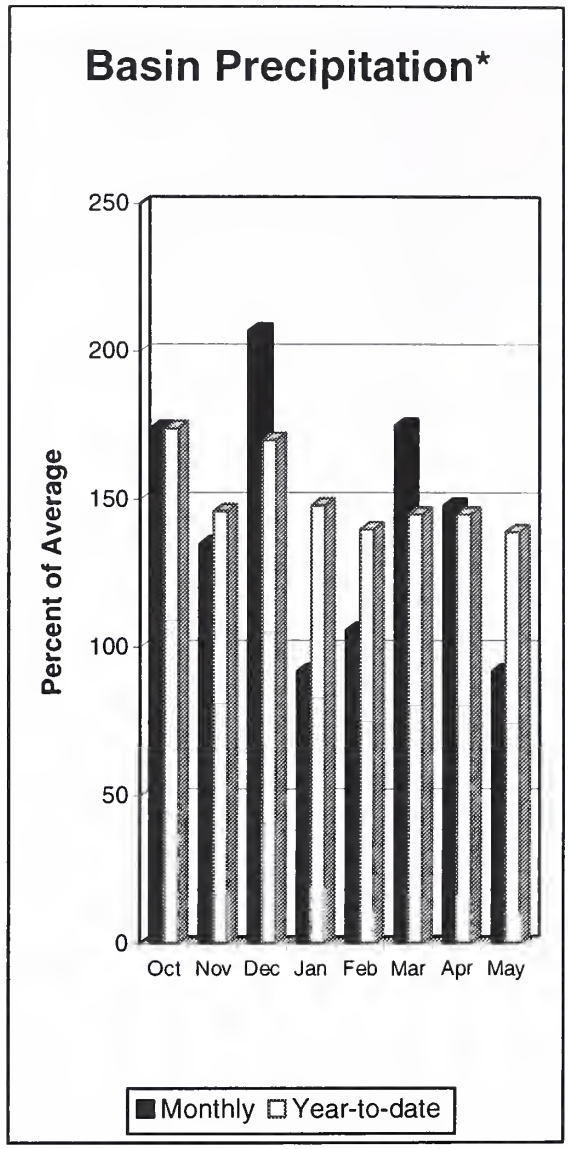
STEVENS
Calville
Bunchgross Meadows
PEND OREILLE
COLVILLE-KETTLE BASIN
Newport
Quartz Peak
SPOKANE RIVER BASIN
Davenport
Spokane
LINCOLN
SPOKANE

Spokane River Basin





*Based on selected stations

The June 1 forecasts for summer runoff within the Spokane River Basin are 183% of average near Post Falls and 166% of average at Long Lake. The forecast is based on a basin snowpack that is 168% of average and precipitation that is 139% of average for the water year. Precipitation for May was near normal at 98% of average. Streamflow on the Spokane River at Long Lake was 190% of average for May. June 1 storage in Coeur d'Alene Lake was 454,500 acre feet, 162% of average, and 191% of capacity. Snowpack at Quartz Peak SNOTEL site contained less than one inch of water which is normal for this site. Average temperatures in the Spokane basin were 4 degrees above normal.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - June 1, 1997

		10% (1)	50% (1)	90% (1)	30%	70%	30%	70%	Avg
SPOKANE near Post Falls (2)	JUN-SEP	1224	1359	1450	183	1541	1676	794
	JUN-JUL	1045	1161	1240	178	1319	1435	697
SPOKANE at Long Lake	JUN-JUL	1233	1352	1433	166	1514	1633	861
	JUN-SEP	1562	1702	1797	166	1892	2032	1083

SPOKANE RIVER BASIN
Reservoir Storage (1000 AF) - End of May

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
COEUR D'ALENE	238.5	454.5	243.5	280.5

SPOKANE RIVER BASIN
Watershed Snowpack Analysis - June 1, 1997

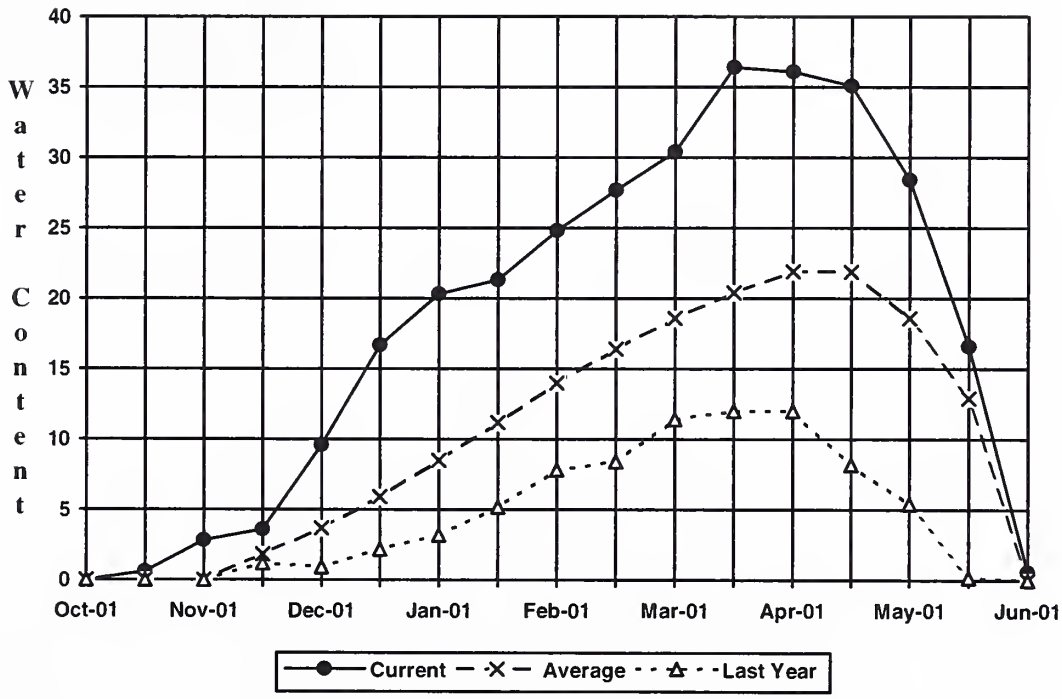
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
SPOKANE RIVER	7	158	168
NEWMAN LAKE	1	0	0

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

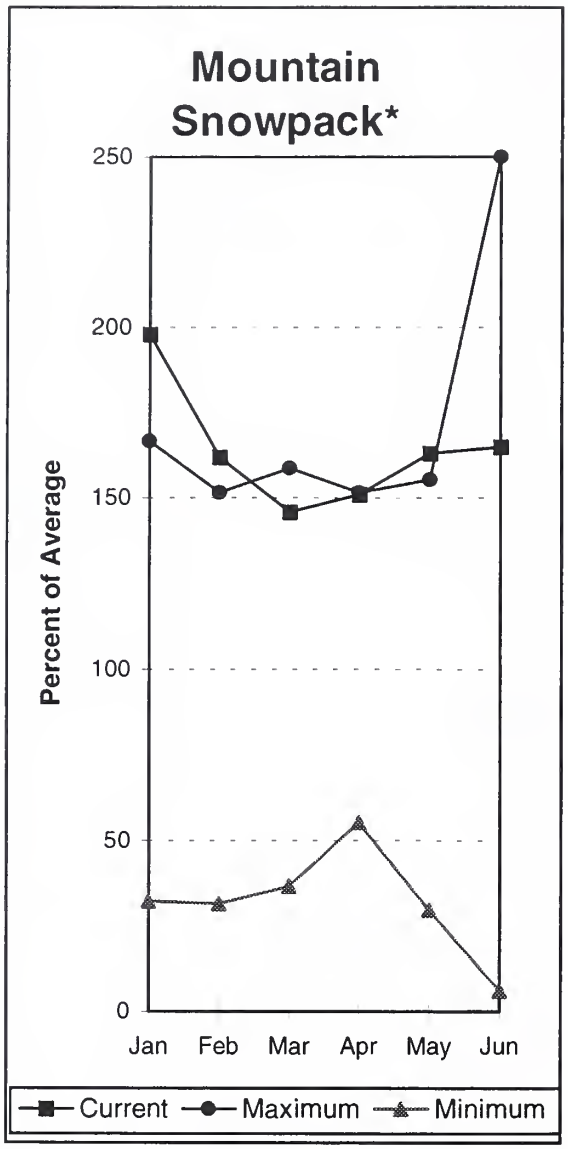
The average is computed for the 1961-1990 base period.

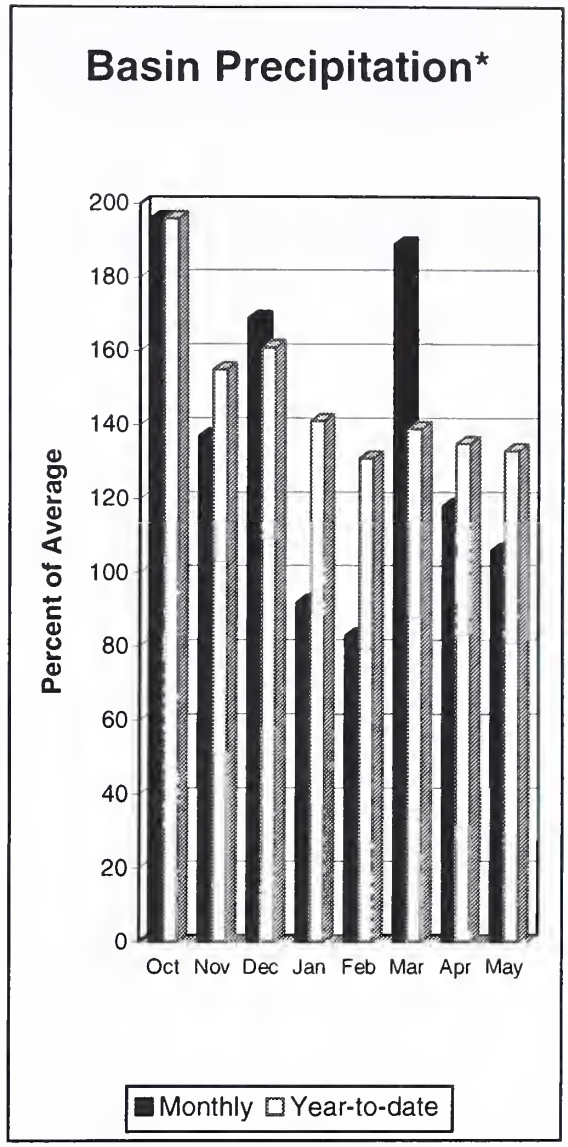
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Quartz Peak SNOTEL
Elevation 4700 ft.



Colville - Pend Oreille River Basins





*Based on selected stations

The forecast for the Kettle River streamflow is for 156% of average; the Pend Oreille, below Box Canyon, 166%; and the Priest River, near the town of Priest River, 141% of average for the summer runoff period. The forecast for the Columbia River at Birchbank is for runoff to be 122% of average. May streamflow was 187% of average on the Pend Oreille River,139% on the Columbia at the International Boundary, and 157% on the Kettle River. June 1 snow cover was 165% of average in the Pend Oreille Basin and 143% of average in the Kettle River Basin. Precipitation during May was 106% of average, bringing the year-to-date precipitation to 133% of average. Reservoir storage in Roosevelt and Banks lakes was reported to be 94% of average and 52% of capacity on May 1. Reservoir managers are continuing to manage for anticipated high stream flows this summer. Average temperatures were 4 degrees above normal.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - June 1, 1997

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
PEND OREILLE Lake Inflow (1,2)	JUN-JUL	9273	10392	10900	169	11408	12527	6449
	JUN-SEP	11094	12336	12900	168	13464	14706	7669
PRIEST nr Priest River (1,2)	JUN-SEP	342	447	495	141	543	648	351
PEND OREILLE bl Box Canyon (1,2)	JUN-JUL	8365	10039	10800	165	11561	13235	6543
	JUN-SEP	10205	12058	12900	166	13742	15595	7754
COLVILLE at Kettle Falls	JUN-SEP	56	66	73	177	80	90	41
	JUN-JUL	39	48	54	180	60	69	30
KETTLE near Laurier	JUN-SEP	1127	1247	1328	156	1409	1529	851
	JUN-JUL	1030	1125	1190	157	1255	1350	758
COLUMBIA at Birchbank (1,2)	JUN-JUL	24479	26625	27600	121	28575	30721	22910
	JUN-SEP	34424	37158	38400	122	39642	42376	31580
COLUMBIA at Grand Coulee Dm (1,2)	JUN-SEP	51725	55559	57300	137	59041	62875	41706
	JUN-JUL	38125	41271	42700	136	44129	47275	31400

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

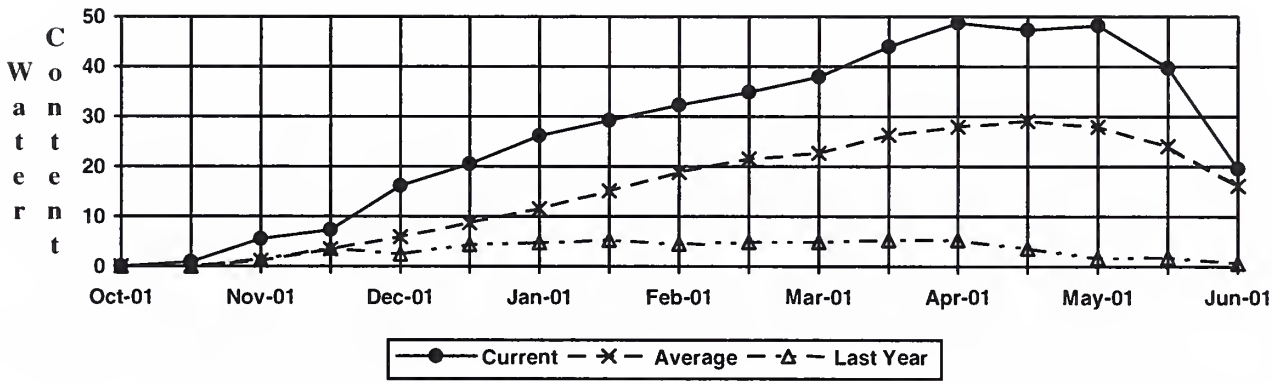
COLVILLE - PEND OREILLE RIVER BASINS
Reservoir Storage (1000 AF) - End of May

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
ROOSEVELT	5232.0	2398.6	1861.2	2851.0
BANKS	715.0	665.5	664.7	418.0

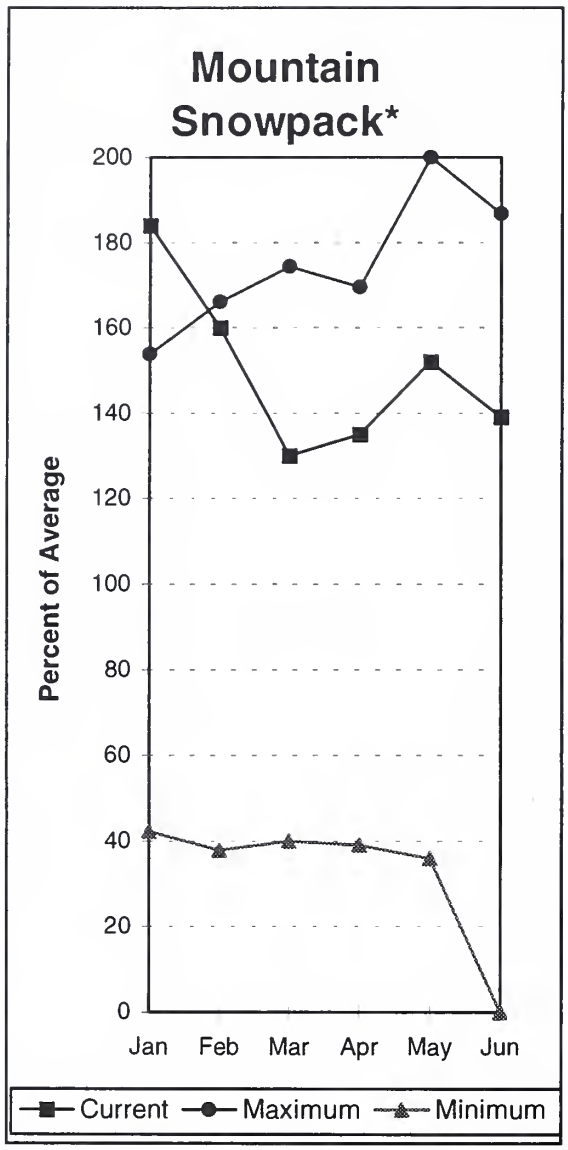
COLVILLE - PEND OREILLE RIVER BASINS
Watershed Snowpack Analysis - June 1, 1997

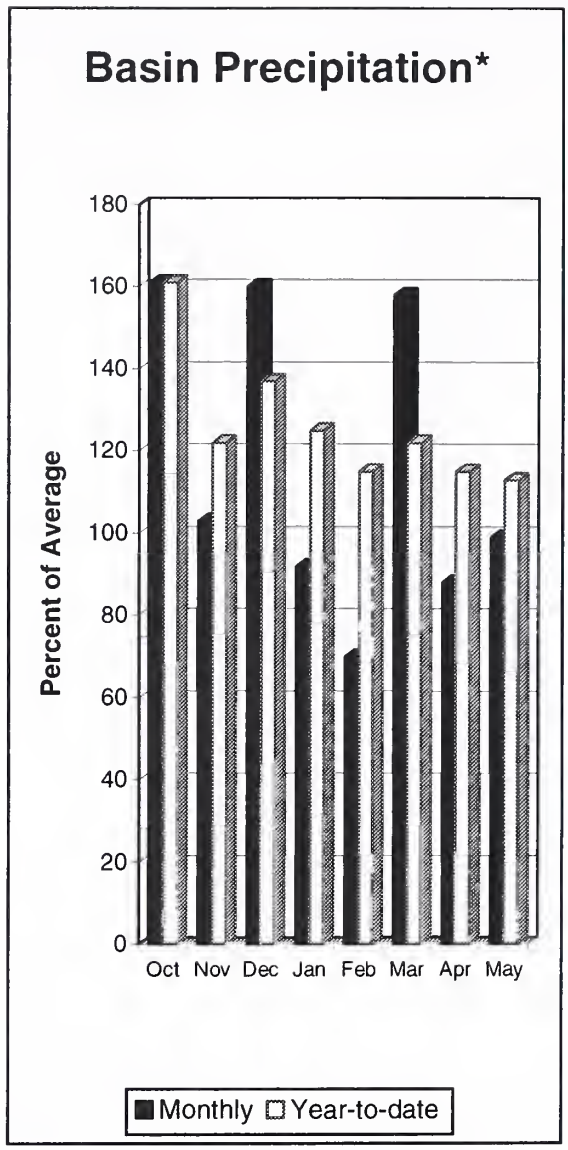
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
COLVILLE RIVER	0	0	0
PEND OREILLE RIVER	42	98	165
KETTLE RIVER	1	63	143

Bunchgrass Meadow SNOTEL
Elevation 5000 ft.



Okanogan - Methow River Basins





*Based on selected stations

Summer runoff forecast for the Okanogan River is 169% of average; the Similkameen River, 153%; the Methow River, 157%; and Salmon Creek, 143% of average. June 1 snow cover on the Okanogan was 137% of average; the Methow, 180%; and the Similkameen River, 101%. Snowpack at Salmon Meadows SNOTEL site was completely melted by June 1. May precipitation in the Okanogan-Methow was 99% of average, with precipitation for the water year remaining above average at 113%. May streamflow for the Methow River was 164% of average, 205% for the Okanogan River, and 189% for the Similkameen. Storage in the Conconully Reservoirs was 23,200 acre feet, which is 99% of capacity and 129% of the June 1 average.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - June 1, 1997

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SIMILKAMEEN near Nighthawk (1)	JUN-SEP	1044	1220	1300	153	1380	1556	850
	JUN-JUL	909	1082	1160	154	1238	1411	755
	JUN-JUN	651	788	850	151	912	1049	564
OKANOGAN near Tonasket (1)	JUN-SEP	1344	1589	1701	169	1813	2058	1005
	JUN-JUL	1124	1340	1438	170	1536	1752	848
	JUN-JUN	727	904	984	160	1064	1241	615
SALMON CREEK near Conconully	JUN-JUL	6.17	10.35	13.20	142	16.05	20.23	9.30
	JUN-SEP	6.9	11.5	14.6	143	17.7	22	10.2
METHOW RIVER near Pateros	JUN-SEP	754	824	872	157	920	990	555
	JUN-JUL	665	726	767	158	808	869	486
	JUN-JUN	453	504	538	150	572	623	359

OKANOGAN - METHOW RIVER BASINS
Reservoir Storage (1000 AF) - End of May

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
SALMON LAKE	10.5	9.9	9.6	9.0
CONCONULLY RESERVOIR	13.0	13.3	13.2	9.0

OKANOGAN - METHOW RIVER BASINS
Watershed Snowpack Analysis - June 1, 1997

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
OKANOGAN RIVER	6	83	137
OMAK CREEK	1	0	0
SANPOIL RIVER	0	0	0
SIMILKAMEEN RIVER	2	66	101
CONCONULLY LAKE	1	0	0
METHOW RIVER	3	94	180

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

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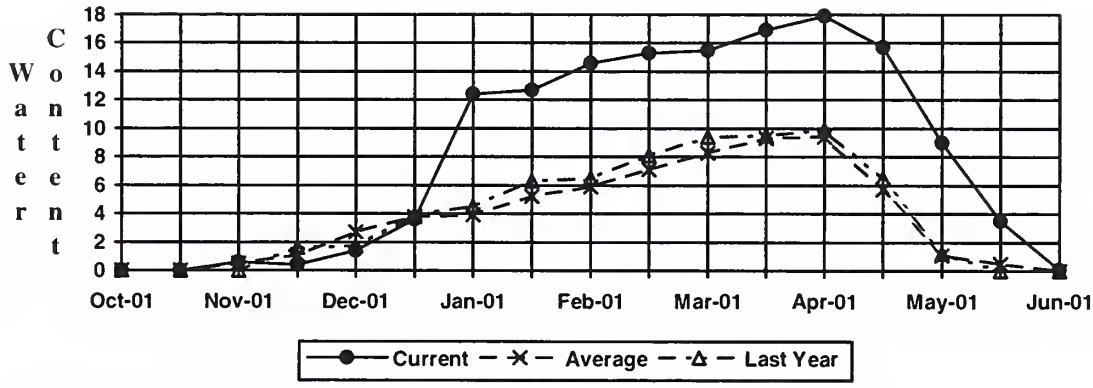
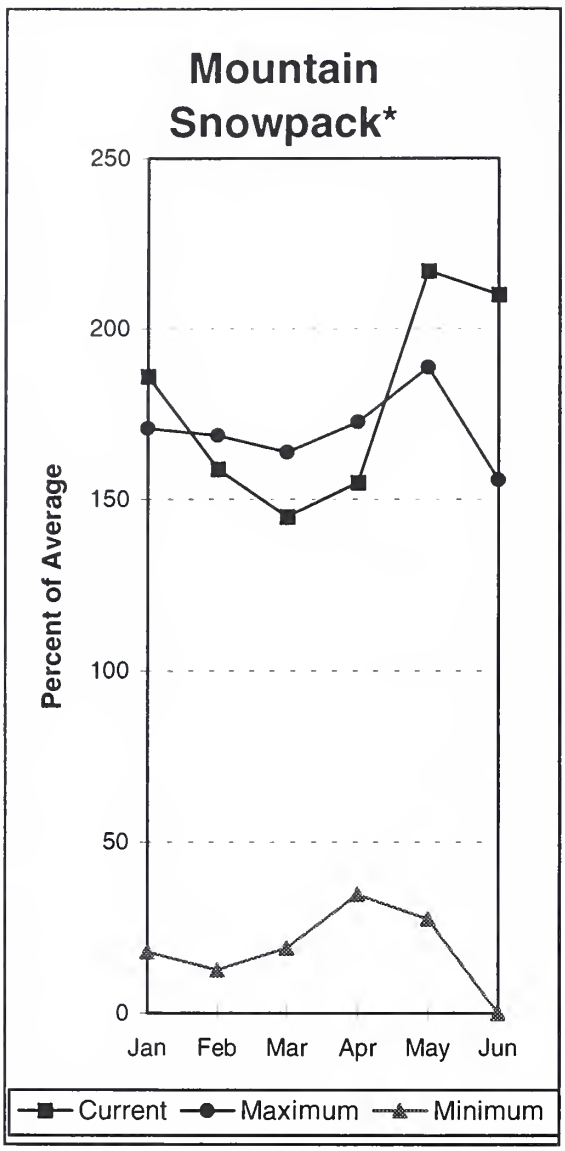
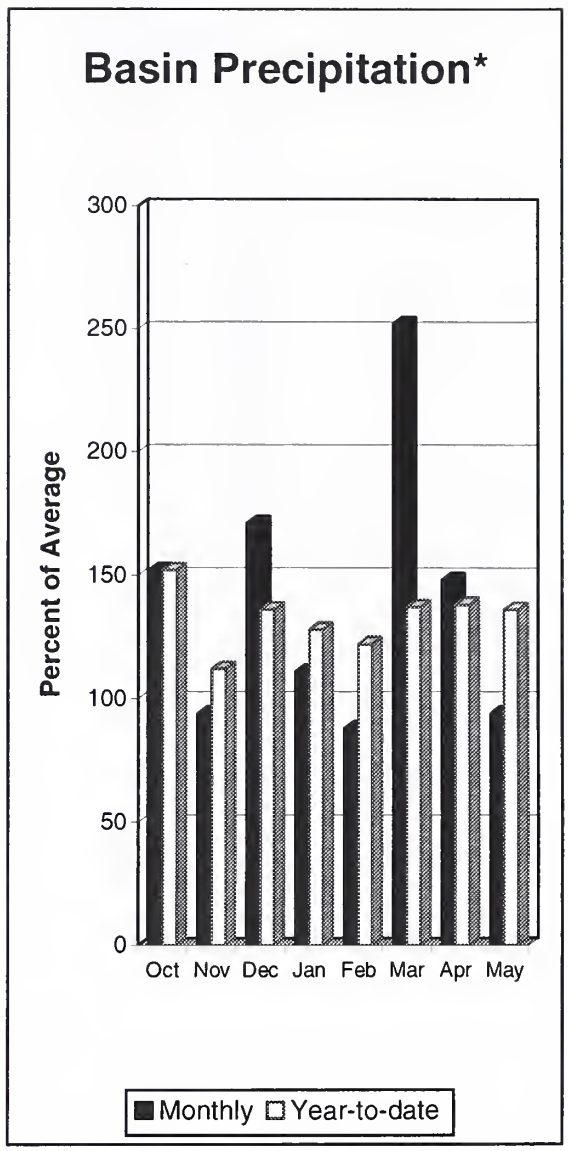
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Salmon Meadows SNOTEL
Elevation 4500 ft.



Wenatchee - Chelan River Basins





*Based on selected stations

Precipitation during May was 94% of average in the basin and 136% for the year-to-date. Runoff for the Entiat River is forecast to be 196% of average for the summer. The June-September forecast for the Chelan River is for 149% of average, for the Wenatchee River it is 178%, and for the Stehekin it is 137% of average. Icicle, Stemilt and Squilchuck creeks are all expected to be much above average this summer. May streamflows on the Chelan and Wenatchee rivers averaged 160% of normal. June 1 snowpack in the Wenatchee Basin was 216% of average. The Chelan Basin was 204% of average. Snowpack in the Entiat River Basin was much above normal as well. Snowpack in the Colockum Ridge and Stemilt Creek areas has melted as normal. Reservoir storage in Lake Chelan was 511,200 acre feet or 113% of June 1 average and 76% of capacity. Lyman Lake SNOTEL had the most snow water with 73.9 inches of water. This site would normally have 43.3 inches on June 1.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - June 1, 1997

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
CHELAN RIVER near Chelan	JUN-SEP	940	1036	1101	149	1166	1262	738
	JUN-JUL	757	842	899	149	956	1041	602
	JUN-JUN	437	506	553	142	600	669	390
STEHEKIN near STEHEKIN	JUN-SEP	645	709	753	137	797	861	548
	JUN-JUL	486	538	574	136	610	662	422
	JUN-JUN	267	308	336	130	364	405	259
ENTIAT RIVER near Ardenvoir	JUN-SEP	219	234	245	196	256	271	125
	JUN-SEP	219	234	245	196	256	271	125
	JUN-JUN	113	126	135	155	144	158	87
WENATCHEE at Plain	JUN-JUL	942	1008	1053	176	1098	1164	600
	JUN-SEP	1139	1223	1280	178	1337	1421	718
	JUN-JUN	491	542	576	147	610	661	391
STEMILT nr Wenatchee (miners in)	JUN-SEP	155	182	200	145	218	245	138
ICICLE CREEK near Leavenworth	JUN-JUL	232	255	270	157	285	308	172
	JUN-SEP	263	287	303	153	319	343	198
	JUN-JUN	126	147	162	140	177	198	116
COLUMBIA R. bl Rock Island Dam (2)	JUN-SEP	56498	60727	63600	141	66473	70702	45171
	JUN-JUL	42220	45721	48100	140	50479	53980	34423

WENATCHEE - CHELAN RIVER BASINS
Reservoir Storage (1000 AF) - End of May

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
CHELAN LAKE	676.1	511.2	458.8	450.6

WENATCHEE - CHELAN RIVER BASINS
Watershed Snowpack Analysis - June 1, 1997

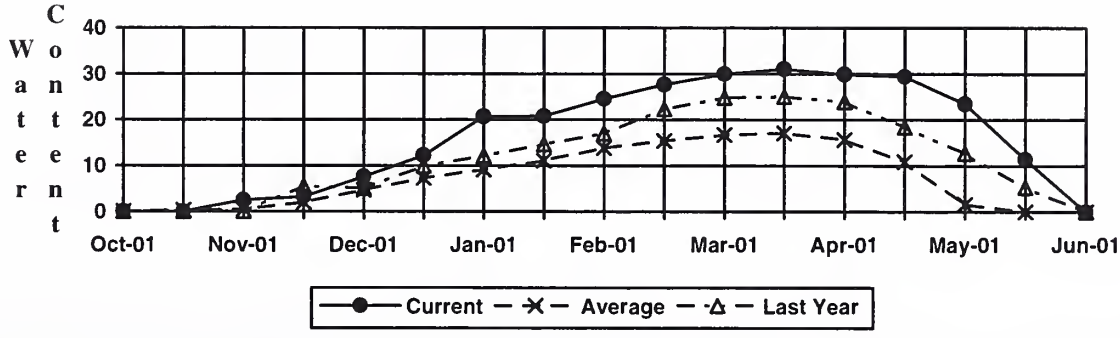
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
CHELAN LAKE BASIN	4	119	204
ENTIAT RIVER	1	0	0
WENATCHEE RIVER	6	164	216
SQUILCHUCK CREEK	0	0	0
STEMILT CREEK	1	0	0
COLOCKUM CREEK	1	0	0

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

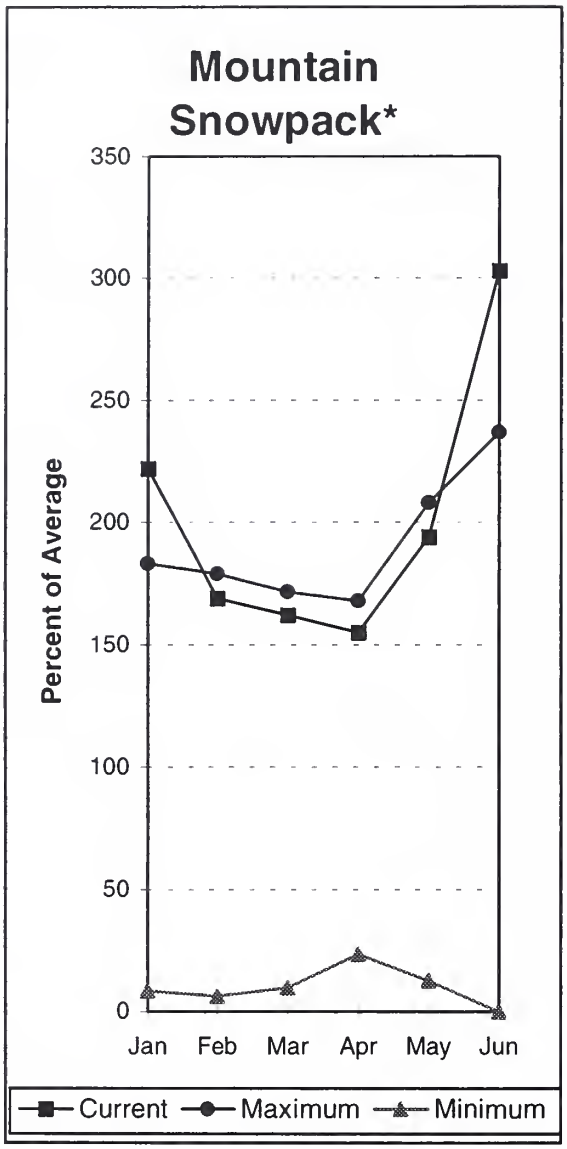
The average is computed for the 1961-1990 base period.

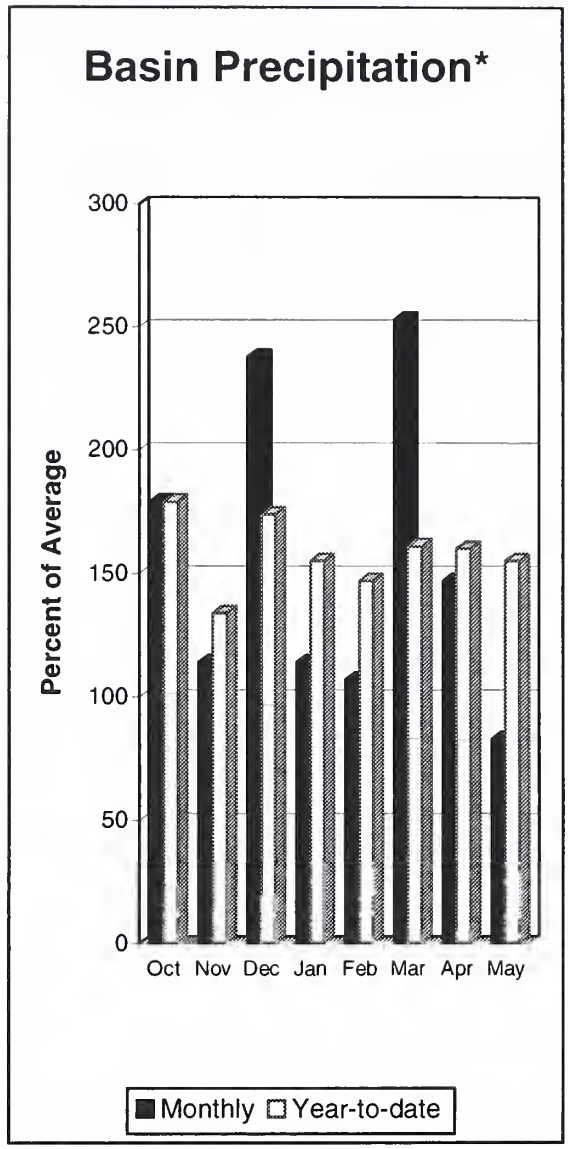
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Pope Ridge SNOTEL
Elevation 3540 ft.



Yakima River Basin





*Based on selected stations

June 1 reservoir storage for the five major reservoirs was 903,800 acre feet or 97% of average. June 1 summer streamflow forecasts are for much above average in the Yakima Basin. Forecasts for the Yakima River at Cle Elum are for 163% of average; Naches River, 168%; the Yakima River near Parker, 170%; Ahtanum Creek, 161%; and the Tieton River, 142%. The Klickitat River near Glenwood is forecast at 228% of average flows this summer. May streamflows within the basin were: the Yakima River near Kiona 293% of average; the Yakima near Cle Elum, 179%; and the Naches River at 201%. June 1 snowpack was 303% based upon 11 snow courses and SNOTEL readings within the Yakima Basin. Precipitation was 83% of average for May and 155% for the water year-to-date. Volume forecasts for the Yakima Basin are for natural flow. As such, they may differ from the U.S. Bureau of Reclamation's forecast for the total water supply available which includes irrigation return flow.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - June 1, 1997

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
KEECHELUS LAKE INFLOW	JUN-JUL	87	96	103	201	109	118	51
	JUN-SEP	101	112	119	192	126	137	62
	JUN-JUN	58	64	69	191	73	80	36
KACHESS LAKE INFLOW	JUN-JUL	77	84	89	198	94	101	45
	JUN-SEP	86	95	100	193	106	114	52
	JUN-JUN	51	57	61	183	64	70	33
CLE ELUM LAKE INFLOW	JUN-JUL	260	284	301	150	318	342	201
	JUN-SEP	304	333	353	148	373	402	239
	JUN-JUN	149	170	184	134	198	219	137
YAKIMA at Cle Elum	JUN-JUN	332	367	390	155	413	448	251
	JUN-JUL	521	571	606	168	641	691	361
	JUN-SEP	623	682	722	163	762	821	444
BUMPING LAKE INFLOW	JUN-SEP	91	104	113	147	122	135	77
	JUN-JUL	79	90	98	151	106	118	65
	JUN-JUN	48	57	64	141	70	80	45
AMERICAN RIVER near Nile	JUN-SEP	84	92	97	149	102	109	65
	JUN-JUL	69	76	81	145	86	93	56
	JUN-JUN	45	50	54	138	58	63	39
RIMROCK LAKE INFLOW	JUN-SEP	179	193	203	142	213	227	143
	JUN-JUL	135	146	154	145	162	173	106
	JUN-JUN	80	89	96	142	102	112	67
NACHES near Naches	JUN-SEP	614	671	710	168	749	806	424
	JUN-JUL	497	544	576	166	608	655	347
	JUN-JUN	334	373	400	165	427	466	243
AHTANUM CREEK nr Tampico (2)	JUN-SEP	53	58	61	161	64	70	38
	JUN-JUL	46	51	54	159	57	62	34
	JUN-JUN	38	41	44	157	47	50	28
YAKIMA near Parker	JUN-SEP	1360	1500	1595	170	1690	1830	938
	JUN-JUL	1112	1227	1305	174	1383	1498	749
	JUN-SEP	1360	1500	1595	170	1690	1830	938
KLICKITAT near Glenwood	JUN-JUN	86	93	97	248	101	107	39
	JUN-SEP	143	153	160	228	167	177	70

YAKIMA RIVER BASIN
Reservoir Storage (1000 AF) - End of May

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
KEECHELUS	157.8	146.8	159.2	144.0
KACHESS	239.0	223.9	201.2	218.0
CLE ELUM	436.9	343.3	436.6	378.0
BUMPING LAKE	33.7	31.3	35.3	27.0
RIMROCK	198.0	158.5	197.3	167.0

YAKIMA RIVER BASIN
Watershed Snowpack Analysis - June 1, 1997

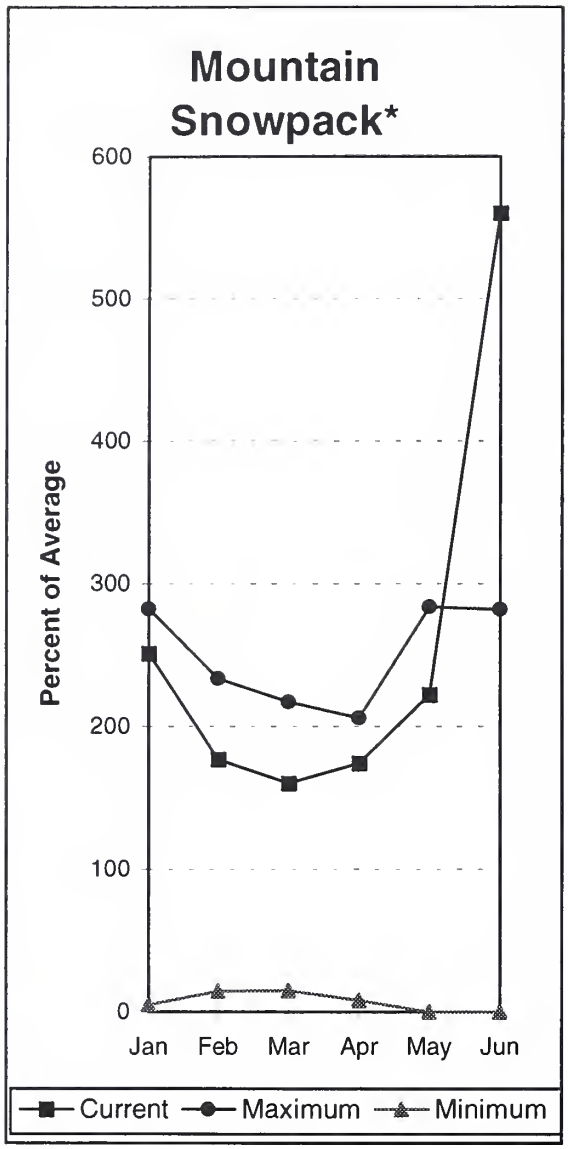
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
YAKIMA RIVER	11	262	303
AHTANUM CREEK	2	484	853

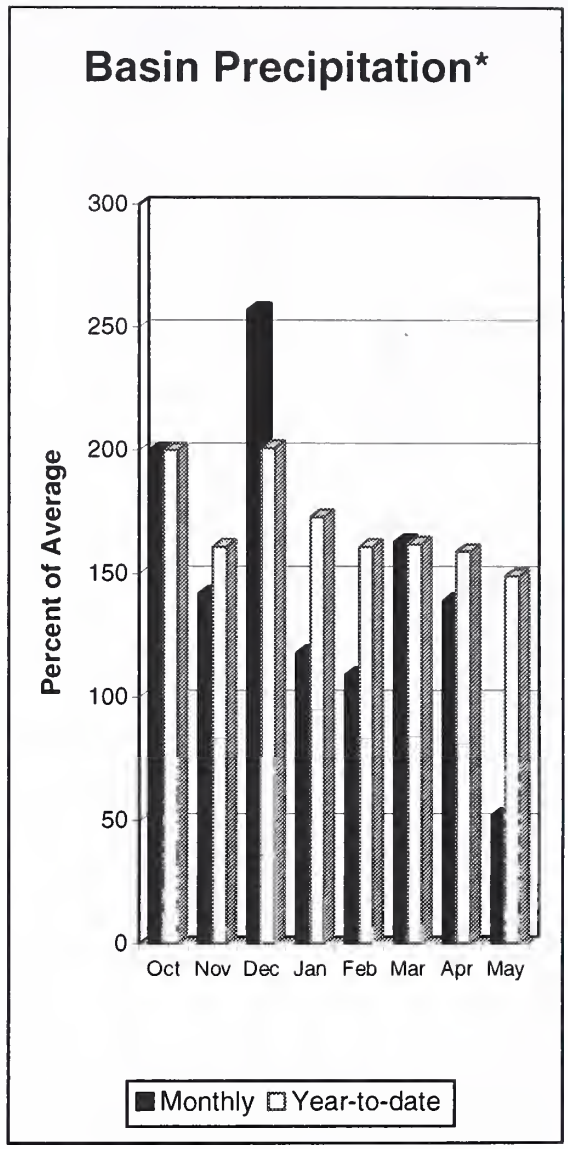
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Walla Walla River Basin





*Based on selected stations

May precipitation was 52% of average, bringing the year-to-date precipitation to 149% of average. June 1 snowpack was 560% of average at Touchet #2 SNOTEL site. The forecast is for 146% of average streamflow in the Snake River below Lower Granite Dam for the coming summer, for the Grande Ronde at Troy, 121%, and 175% for Mill Creek. May streamflow was 202% of average for the Walla Walla River, 167% for the Snake River, and 173% for the Grande Ronde River near Troy. The Touchet SNOTEL site had 5.6 inches of snow-water-equivalent. The average June 1 reading for this site is 0.0 inches. Average temperatures were 4 degrees above normal for the area.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - June 1, 1997

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
GRANDE RONDE at Troy (1)	JUN-SEP	523	631	680	121	729	837	564
SNAKE blw Lower Granite Dam (1,2)	JUN-JUL	12483	13595	14100	146	14605	15717	9678
	JUN-SEP	16547	17959	18600	150	19241	20653	12390
MILL CREEK at Walla Walla	JUN-SEP	9.92	11.81	13.10	175	14.39	16.28	7.50
	JUN-JUL	9.63	11.52	12.80	175	14.08	15.97	7.30
	JUN-JUN	9.49	11.28	12.50	176	13.72	15.51	7.10
SF WALLA WALLA near Milton-Freewater	JUN-JUL	22	24	26	136	28	31	19.3
	JUN-SEP	35	38	41	126	43	47	33
COLUMBIA R. at The Dalles (2)	JUN-SEP	71245	78065	82700	139	87335	94155	59652
	JUN-JUL	52144	57834	61700	136	65566	71256	45431

WALLA WALLA RIVER BASIN
Reservoir Storage (1000 AF) - End of May

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

WALLA WALLA RIVER BASIN
Watershed Snowpack Analysis - June 1, 1997

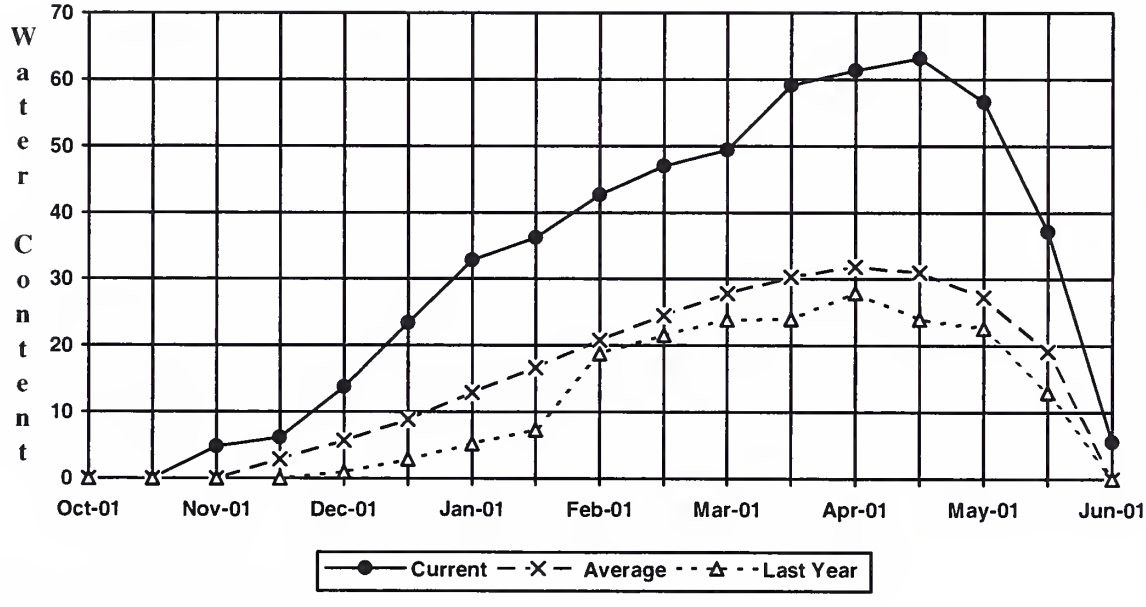
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
WALLA WALLA RIVER	1	0	0

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

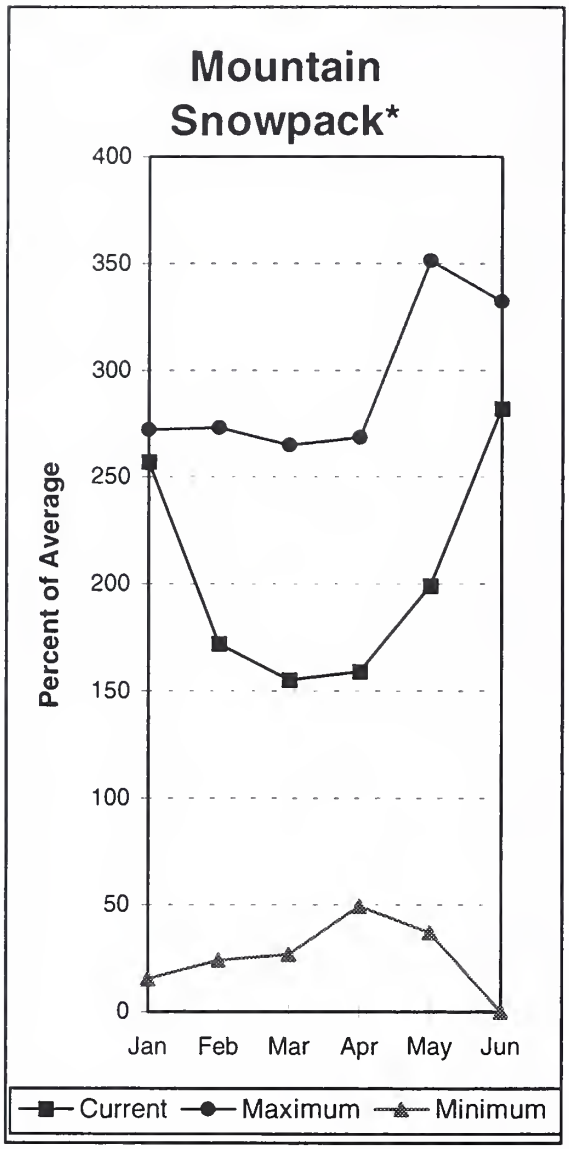
The average is computed for the 1961-1990 base period.

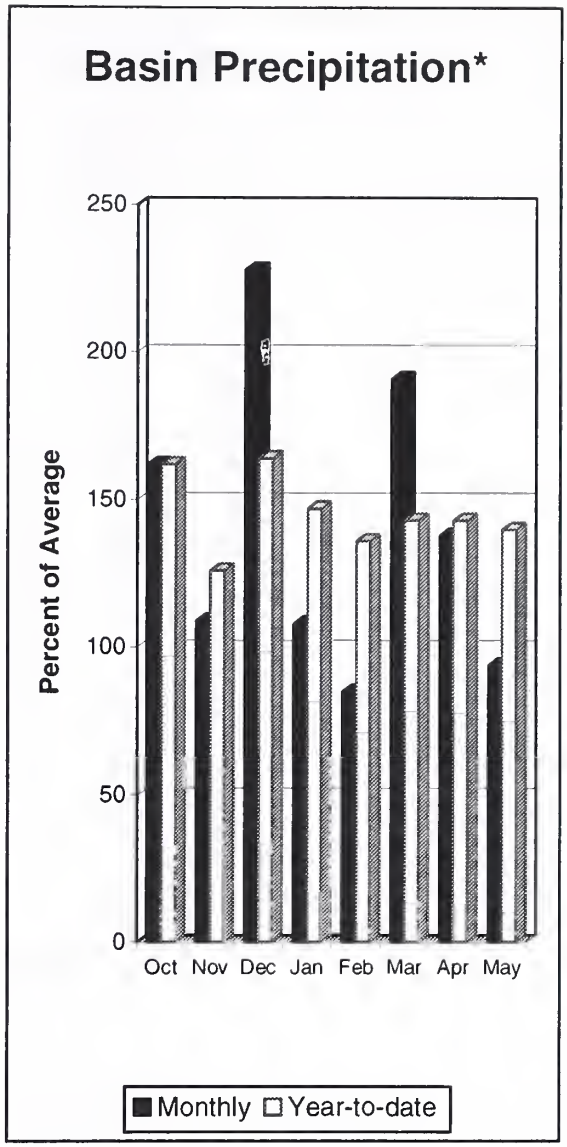
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Touchet #2 SNOTEL
Elevation 5530 ft.



Cowlitz - Lewis River Basins





*Based on selected stations

The forecast for summer runoff in the Lewis River Basin is 158% of average. The Cowlitz River at Castle Rock is forecast for 116% of average runoff. May streamflow for the Cowlitz River was 143% of average, and 130% for the Lewis River. May precipitation was 94% of average, 140% of average for the water-year. June 1 snow cover for the Cowlitz River Basin was 190% and the Lewis River Basin was 374% of average. The Paradise Park SNOTEL recorded the most water content for the basin and the state with 104.2 inches of water. Average June 1 water content is 48.1 inches. Average temperatures were 5 degrees above normal during May.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - June 1, 1997

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
LEWIS at Ariel (2)	JUN-SEP	714	765	800	158	835	886	506
	JUN-JUL	499	541	570	161	599	641	354
	JUN-JUN	315	354	380	161	406	445	236
COWLITZ R. bl Mayfield Dam (2)	JUN-SEP	500	964	1280	130	1596	2060	982
COWLITZ R. at Castle Rock (2)	JUN-SEP	503	1097	1500	116	1903	2497	1299
KLICKITAT near Glenwood	JUN-JUN	86	93	97	248	101	107	39
	JUN-SEP	143	153	160	228	167	177	70

COWLITZ - LEWIS RIVER BASINS
Reservoir Storage (1000 AF) - End of May

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

COWLITZ - LEWIS RIVER BASINS
Watershed Snowpack Analysis - June 1, 1997

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
LEWIS RIVER	4	418	374
COWLITZ RIVER	6	176	190

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

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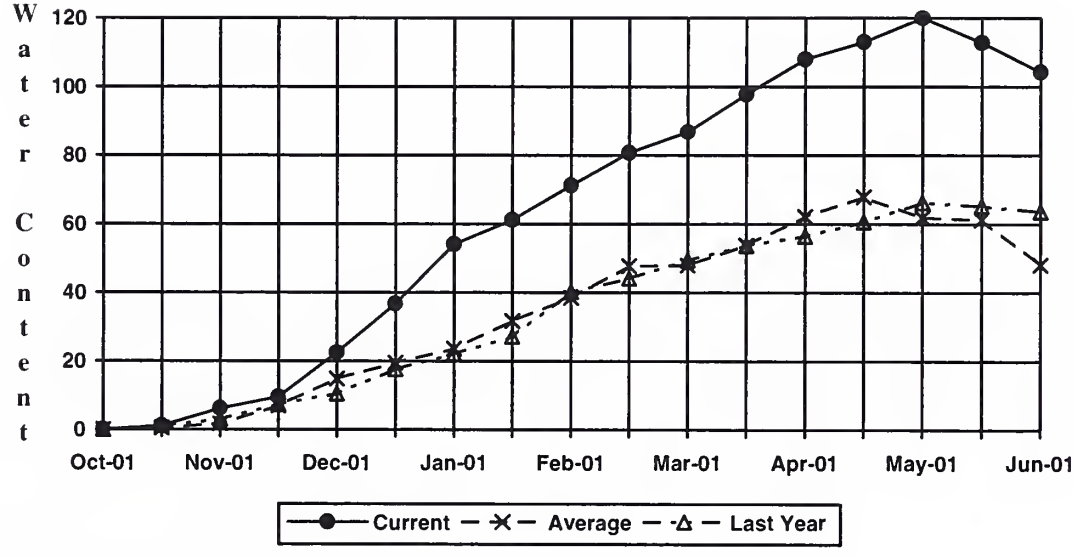
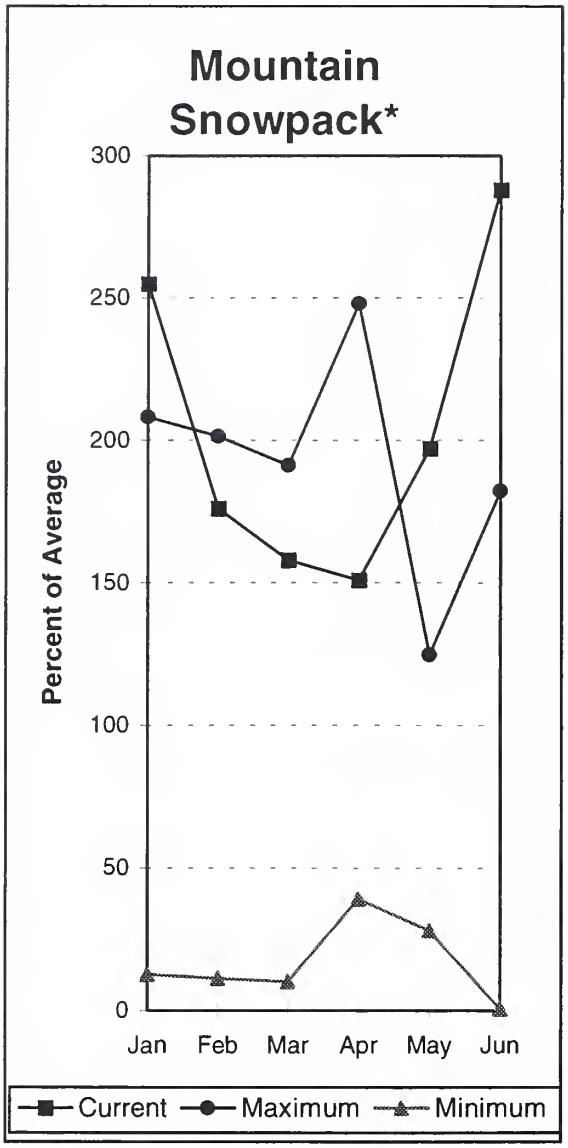
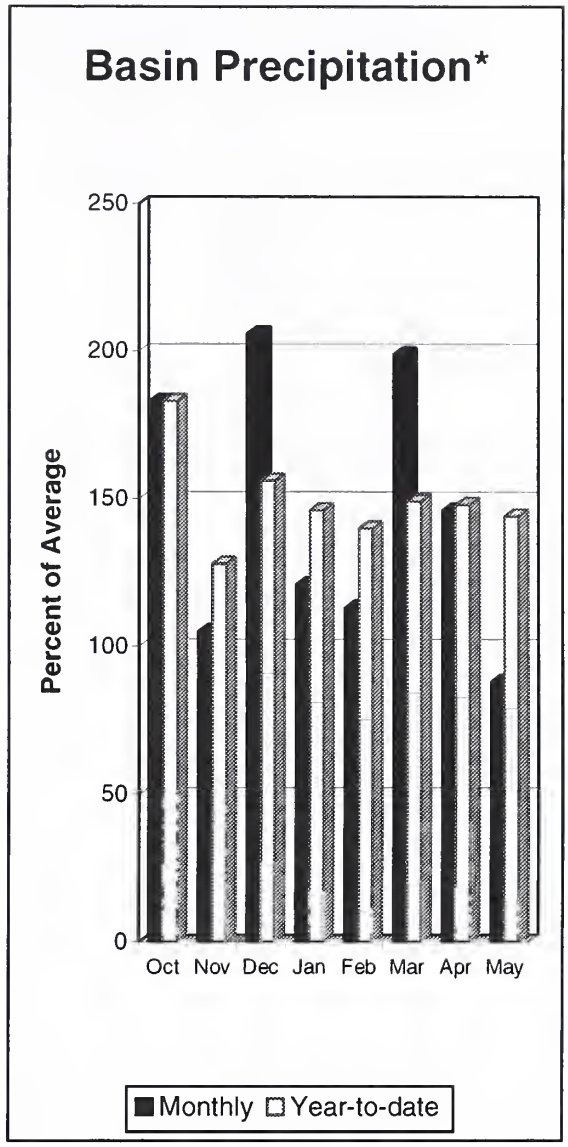
Paridise SNOTEL
Elevation 5120 ft.



White - Green River Basins





*Based on selected stations

Summer runoff is forecast to be 122% of average for the Green River. The White and Nisqually rivers should also experience above normal flows this summer. June 1 snowpack was 238% of average in the White River Basin and 339% in the Green River Basin. Water content on June 1 at the Morse Lake SNOTEL, at an elevation of 5,400 feet, was 54.9 inches. This site has a June 1 average of 21.4 inches. May precipitation was 88% of average, bringing the water year-to-date to 144% of average for the basins.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - June 1, 1997

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
GREEN RIVER below Howard Hanson Dam	JUN-JUL	70	89	101	129	113	131	78
	JUN-SEP	95	115	129	122	143	163	106
	JUN-JUN	47	62	73	132	83	98	55

WHITE - GREEN RIVER BASINS
Reservoir Storage (1000 AF) - End of May

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

WHITE - GREEN RIVER BASINS
Watershed Snowpack Analysis - June 1, 1997

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
WHITE RIVER	2	134	238
GREEN RIVER	2	339	339

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

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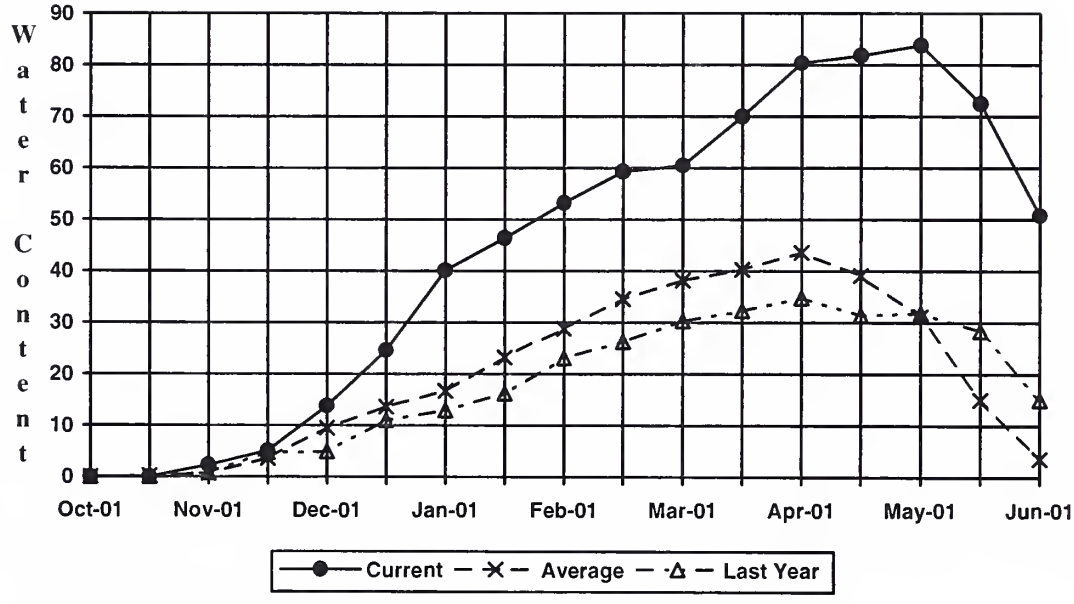
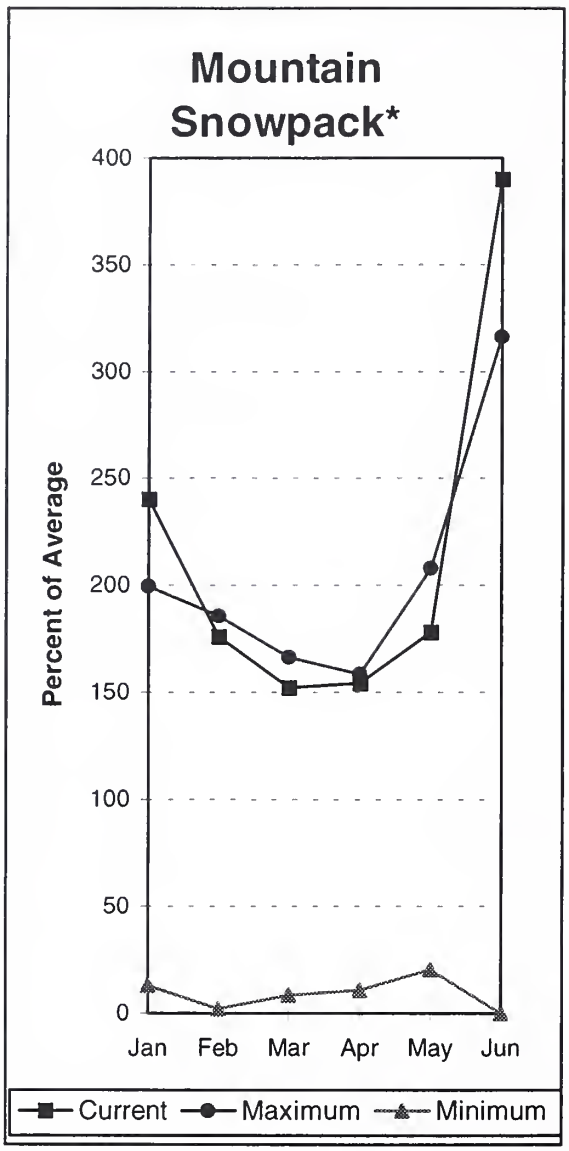
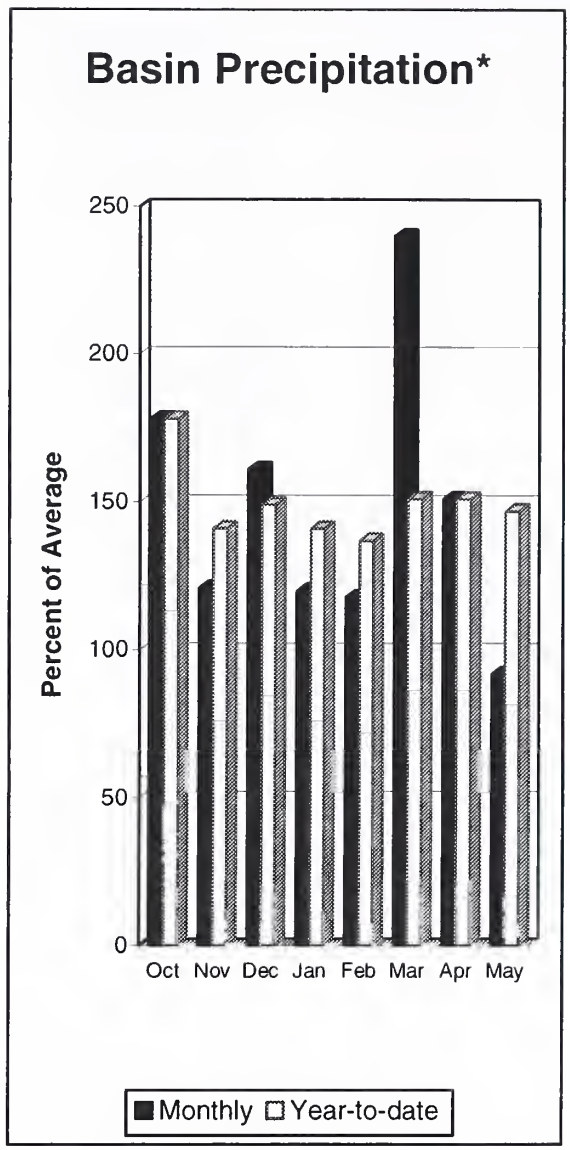
Stampede Pass SNOTEL
Elevation 3860 ft.



Central Puget Sound River Basins





*Based on selected stations

Forecast for spring and summer flows are: 132% of average for the Cedar River near Cedar Falls, 147% for the Rex River, 134% for the South Fork of the Tolt River and 143% for the Cedar River at Cedar Falls. Basin-wide precipitation for May was 92% of average, bringing water-year-to-date to 147% of average. June 1 snow cover in the Snoqualmie River Basin was 177%, and the Skykomish River Basin was 604% of average. Snowpack in the Cedar and Tolt river basins melted prior to June 1. Stevens Pass SNOTEL, at 4,070 feet, had 34.4 inches of water content. Average June 1 water content is 5.7 inches. June temperatures were 5 degrees above normal.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - June 1, 1997

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	50% (Most Probable) (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
CEDAR RIVER near Cedar Falls	JUN-JUL	29	36	40	138	44	51	29
	JUN-SEP	35	43	49	132	54	62	37
	JUN-JUN	19.0	24	27	136	30	35	20
REX RIVER near Cedar Falls	JUN-JUL	8.72	11.69	13.70	149	15.71	18.68	9.20
	JUN-SEP	11.8	15.6	18.1	147	21	24	12.3
	JUN-JUN	6.64	8.76	10.20	150	11.64	13.76	6.80
CEDAR RIVER at Cedar Falls	JUN-JUL	22	27	30	143	33	38	21
	JUN-SEP	27	30	32	143	34	36	22
	JUN-JUN	19.6	25	28	144	31	36	19.4
SOUTH FORK TOLT near Index	JUN-JUL	7.44	8.45	9.13	145	9.81	10.82	6.30
	JUN-SEP	10.12	11.20	11.93	134	12.66	13.74	8.90
	JUN-JUN	4.44	5.28	5.85	139	6.42	7.26	4.20

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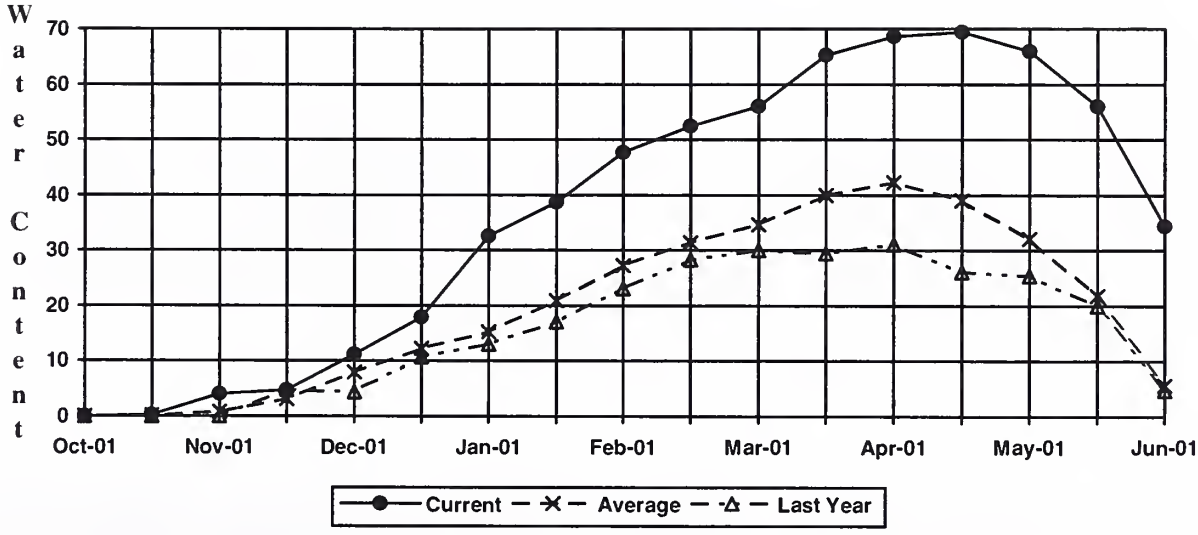
CENTRAL PUGET SOUND RIVER BASINS
Reservoir Storage (1000 AF) - End of May

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

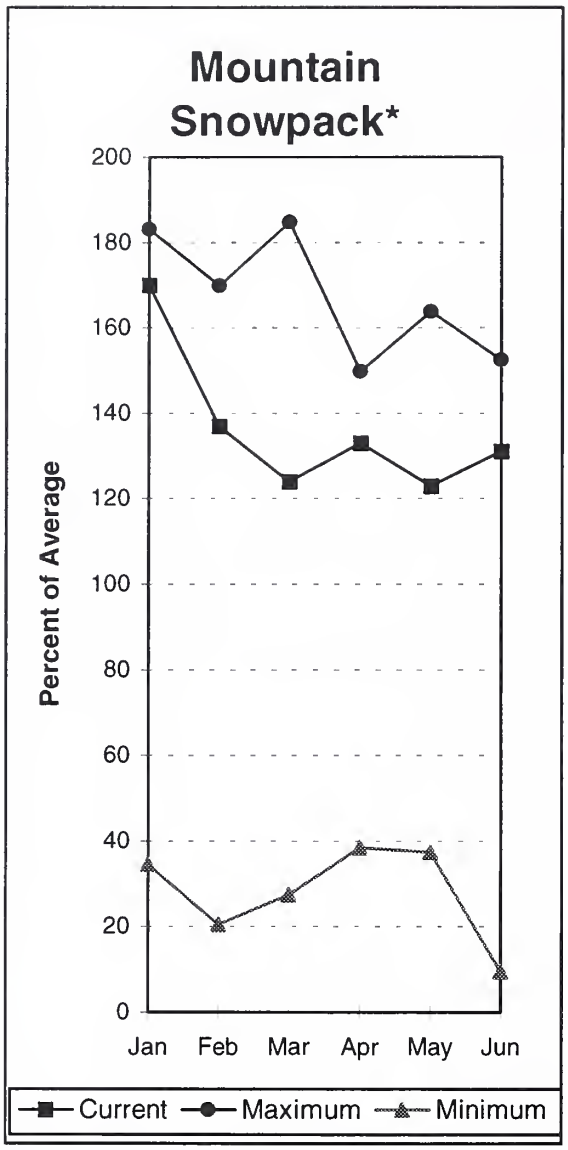
CENTRAL PUGET SOUND RIVER BASINS
Watershed Snowpack Analysis - June 1, 1997

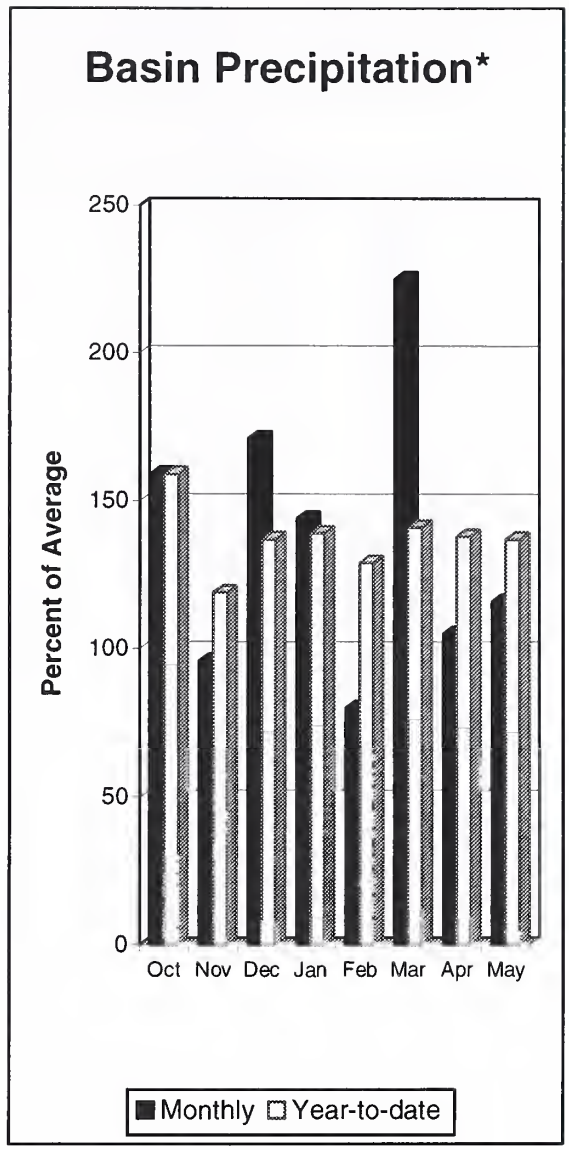
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
CEDAR RIVER	4	0	0
TOLT RIVER	1	0	0
SNOQUALMIE RIVER	3	346	177
SKYKOMISH RIVER	1	732	604

Stevens Pass SNOTEL
Elevation 4070 ft.



North Puget Sound River Basins





*Based on selected stations

Forecast for the Skagit River streamflow is for 134% of average for the spring and summer period. May streamflow in the Skagit River was 150% of average. Other forecast points included the Baker River at 132% and Thunder Creek at 129% of average. Basin-wide precipitation for May was 116% of average, bringing water-year-to-date to 137% of average. June 1 snow cover in the Skagit River Basin was 174%, the Baker River Basin was 141% and the Nooksack River Basin was 78% of average. Rainy Pass SNOTEL, at 4,780 feet, had 41.5 inches of water content. Average June 1 water content is 20.4 inches. June 1 Skagit River reservoir storage was 115% average and 84% of capacity.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - June 1, 1997

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
THUNDER CREEK near Newhalem	JUN-JUL	188	201	210	131	219	232	160
	JUN-SEP	306	323	335	129	347	364	259
SKAGIT RIVER at Newhalem (2)	JUN-SEP	1724	1830	1901	134	1972	2078	1418
	JUN-JUL	639	688	721	130	754	803	553
BAKER RIVER near Concrete	JUN-JUL	609	637	656	134	675	703	490
	JUN-SEP	922	938	949	132	960	976	717
	JUN-JUN	272	300	319	142	338	366	225

NORTH PUGET SOUND RIVER BASINS
Reservoir Storage (1000 AF) - End of May

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
ROSS	1404.1	1185.9	1038.0	1033.9
DIABLO RESERVOIR		NO REPORT		
GORGE RESERVOIR		NO REPORT		

NORTH PUGET SOUND RIVER BASINS
Watershed Snowpack Analysis - June 1, 1997

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
SKAGIT RIVER	5	110	174
BAKER RIVER	0	0	0
NOOKSACK RIVER	2	1003	78

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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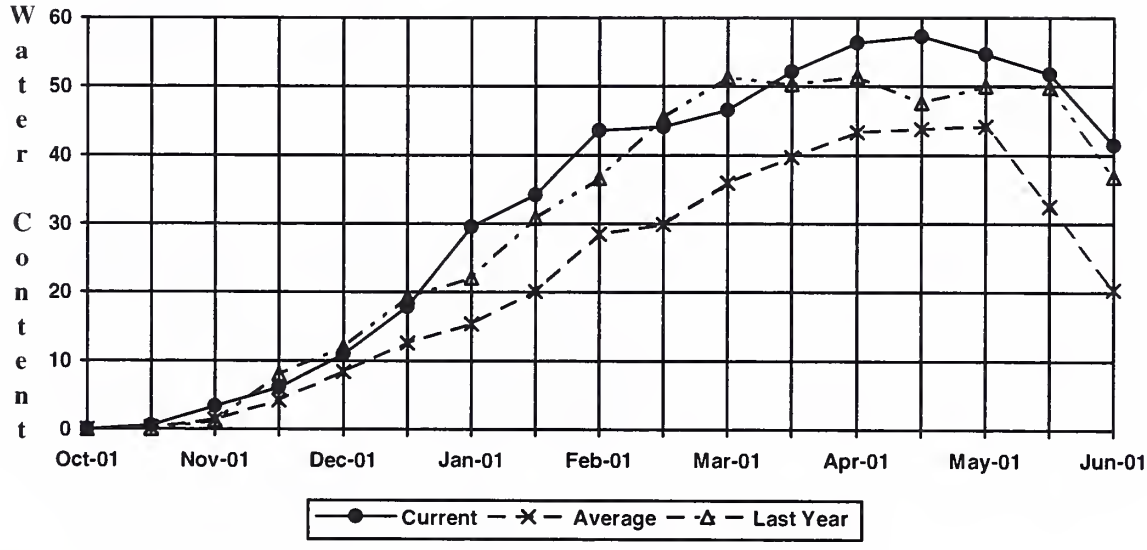
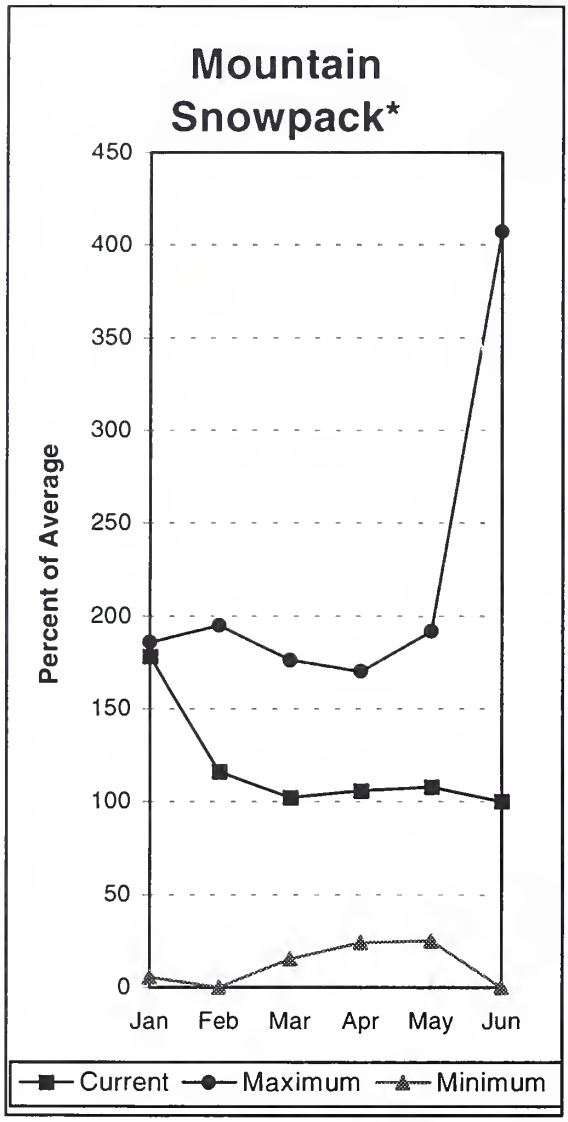
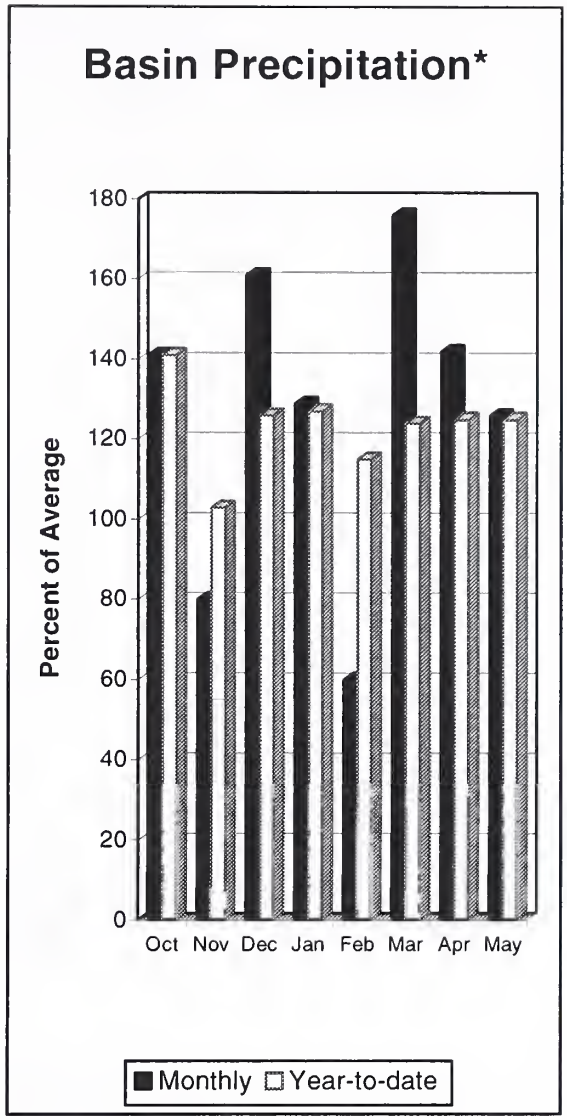
Rainy Pass SNOTEL
Elevation 4780 ft.



Olympic Peninsula River Basins





*Based on selected stations

June forecasts of runoff for streamflow in the Dungeness River Basin are 117% of average and 113% of average for the Elwha River. Both forecasts are down slightly from last month. The Big Quilcene and Wynoochee rivers can expect near to above average runoff this summer also. May precipitation was 126% of average. Precipitation has accumulated at 125% of average for the water year. May precipitation at Quillayute was 7.1 inches. The 30-year average for June 1 is 5.25 inches. The Mount Crag SNOTEL near Quilcene had 5.7 inches of snow-water-equivalent on June 1. Mount Crag would not normally have snow by this time of year. Temperatures were 4 degrees above average for the month.

For more information contact your local Natural Resources Conservation Service office.

Streamflow Forecasts - June 1, 1997

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
DUNGENESS near Sequim	JUN-JUL	79	84	87	117	90	95	74
	JUN-SEP	107	114	119	117	124	131	102
ELWHA near Port Angeles	JUN-JUL	238	254	265	114	276	292	233
	JUN-SEP	325	346	360	113	374	395	319

OLYMPIC PENINSULA RIVER BASINS
Reservoir Storage (1000 AF) - End of May

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

OLYMPIC PENINSULA RIVER BASINS
Watershed Snowpack Analysis - June 1, 1997

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
ELWHA RIVER	0	0	0
MORSE CREEK	0	0	0
DUNGENESS RIVER	0	0	0
QUILCENE RIVER	1	127	0
WYNOOCHEE RIVER	0	0	0

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

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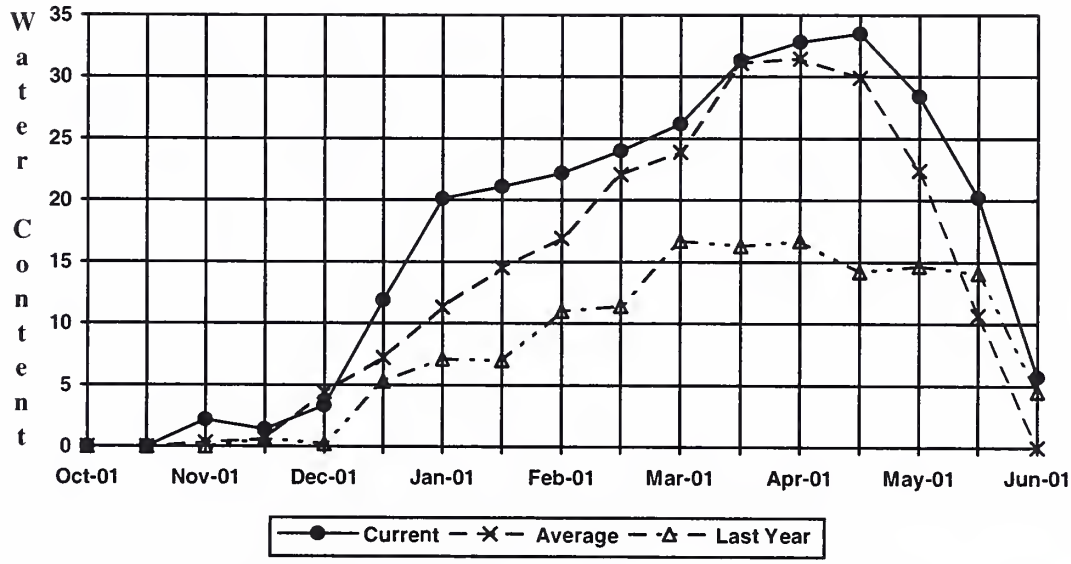
Mount Crag SNOTEL
Elevation 4050 ft.



Issued by

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The Following Organizations Cooperate With the Natural Resources Conservation Service in Snow Survey Work*:

Canada	Ministry of the Environment Investigations Branch, Victoria, British Columbia
State	Washington State Department of Ecology Washington State Department of Natural Resources
Federal	Department of the Army Corps of Engineers U.S. Department of Agriculture Forest Service U.S. Department of Commerce NOAA, National Weather Service U.S. Department of Interior Bonneville Power Administration Bureau of Reclamation Geological Survey National Park Service Bureau of Indian Affairs
Local	City of Tacoma City of Seattle Chelan County P.U.D. Pacific Power and Light Company Puget Sound Power and Light Company Washington Water Power Company Snohomish County P.U.D. Colville Confederated Tribes Spokane County Yakama Indian Nation
Private	Okanogan Irrigation District Wenatchee Heights Irrigation District Newman Lake Homeowners Association

*Other organizations and Individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.

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Washington Basin Outlook Report

Natural Resources Conservation Service
Spokane, WA